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Part I: Co-operation and Association

BELGIUM.

BELGIAN FARMWOMEN'S CLUBS.

SOURCES:

ASOCIATIONS DE FERMÈRIES (*Farmwomen's Clubs*): Rapport présenté à la 1^{re} Section du 11^{me} Congrès International des Cercles de Fermières de Gand, 1913 (*Reports Presented to the First Section of the 3rd. International Congress of Farmwomen's Clubs, held at Ghent, in 1913*). Brussels, "Comité National des Fédérations des Cercles des Fermières", 1913.

§ 1. PROGRESS MADE BY THE FARMWOMEN'S CLUBS BETWEEN 1906 AND 1912.

The beneficent influence women may exert in the field of agricultural economics is now recognised by all. But up to recently they had only applied themselves individually with agricultural interests, without, that any institution uniting these new forces for definite and permanent action.

Belgium, a country very prolific in social experiments, was among the first to give us an example of what may be obtained by the organization of farmwomen.

And indeed by the side of the very numerous agricultural associations, formed for the most part of men, in that country, we find farmwomen's clubs (*cercles de fermières*) springing up and extending themselves, after the example first set by Canada.

The principal inducement for the foundation of these institutions was, as we know, the necessity of arresting the rural exodus that is assuming more and more alarming proportions, and extending itself even among women.

It was considered that one of the most effectual means of opposing this tendency would be to appeal directly to the women, to make them appreciate the benefits of the country life and warn them against the delusions and dangers of the cities, as well as give them professional instruction, so that they might be better fitted for the performance of the special duties intrusted to them, such as dairying, poultry improvement, gardening etc.

The *écoles ménagères ambulantes*, which had been working for many years already partially supplied the need, but it was necessary that the effects of their work should not be lost.

For this purpose, the farmwomen had to be united in permanent associations. There thus arose in 1906 the first *cercles de fermières*, spreading rapidly through the whole of Belgium, above all through the influence of the Catholic party. It is calculated that there are now more than two hundred of them.

Their organization is very simple. During the session of a women's agricultural school, the pupils recruit members from among the farmwomen of the neighbourhood and the first nucleus of the club is thus formed. It is managed by a lady president, two vice presidents, three councillors and a secretary treasurer. The members pay a contribution of fifty centimes. With this, provision is made for the needs of the society, and articles of domestic use, agricultural implements, selected seeds etc, are purchased.

In the course of the meetings, held generally four or five times a year (i) lectures and practical lessons are given, agricultural competitions and shows are held and lotteries organized etc.

Almost all the clubs also possess a library of books on domestic economy, agriculture, hygiene, dairying, livestock improvement, gardening etc.

The most widely read newspapers engaged in promoting this movement are the *Fermière* in the Walloon districts and the *Boerin* in the Flemish parts.

We give in this connection the following table in which, together with the number of clubs founded between 1906 and 1912, the numbers of members, that of the lectures given and that of the audience are shown.

Progress of the Farmwomen's Clubs between 1906 and 1912.

Years	Number of Clubs	Number of Members	Number of Lectures	Audience
1906	2	114	4	99
1907	14	1,961	60	3,324
1908	36	3,931	135	4,181
1909	65	6,162	215	12,447
1910	74	6,929	232	14,209
1911	104	13,273	532	35,713
1912	183	21,461	806	80,143

(i) The work of some clubs in 1912 was rather considerable. Thus the Kerkem, Mol Zolder and Perwes clubs held 10 meetings. The Bonheyden club held 12 and the Ter Band Club 13 etc.

The number of members shows a continual increase, which is significant. Many clubs have already more than 200 members, those of Ghilstel (222), Berlaer - lez - Lierre (318), Blaesveld (270), Bonheyden (263), Herve (272), Denderwindeke (260), Grand-Leez (226), Brugelette (291), Wachtebeke (475), St. Marie d'Overmeire (346), Oisere (305), Loochristi (315) Heusden (256), Templeuve (300) Balegem (310), Calcken (591).

The numbers of those attending the lectures are also encouraging and they appreciably increase from year to year.

§ 2. FEDERATIONS OF THE FARMWOMEN'S CLUBS.

Like the other forms of association in Belgium, so also the farmwomen's clubs tend to unite in federations.

First of all, there is the "Comité National des Fédérations des Cercles de Fermières", presided over by the Baroness Rotsart de Hertaing, to which are due various undertakings which have not a little contributed to the improvement of the associations we are dealing with.

This Committee, convinced of the utility of an interchange of ideas with regard to the best manner of enabling the farmwomen to accomplish their work, promoted the 3rd. International Congress of Farmwomen's Clubs, which was recently held at Ghent (June 12th.-15th., 1913) under the patronage of the Belgian Government.

The Committee, in its desire to supply its affiliated clubs with competent lectures, has instituted an examination for a special lecturer's certificate and fixed a severe programme for it.

This includes the theory of organization, the purposes and means of action of the clubs, rural book-keeping, the education of children, the question of rural exodus, as well as the study of the means for rendering life in the country agreeable; it also includes various ideas as to the cultivation of gardens, the sanitation of farm houses and cattle stalls, the diet of the peasants, livestock improvement, women's work etc, etc.

The first examination was held at Brussels on October 17th. last.

Another question which keenly interested the National Committee of the Federations of Farmwomen's Clubs in the past year was that of the agricultural professional instruction to be imparted to the young women of the rural communes. While waiting for a law sanctioning such instruction, the Committee decided on organizing a higher course of rural economics, and the success of the lectures given was most flattering.

Other Federations are:

(a) "De Belgische Boerinbond" (*Federation of Farmwomen's Clubs*), founded on July 5th., 1911 and on December 31st., 1912 federating 67 clubs with 7,371 members. This Federation promoted a meeting on August 21st., 1912, attended by about 1,400 persons. Its sphere of action extends to the provinces of Brabant, Antwerp, Limbourg and West Flanders. The organ of the federation is the monthly paper "*De Boerin*".

- (b) The *Provincial Federation of West Flanders*, which on December 31st., 1912 federated 21 clubs.
- (c) The *Federation of Farmwomen's Clubs of Walloon Brabant* with 9 clubs.
- (d) The *Provincial Federation of East Flanders Farmwomen's Clubs*, which, founded on September 29th., 1911 with 8 clubs and 700 members, has now 34 clubs affiliated to it, with about 6,000 members. It publishes a monthly review of 12 pages : « *De Landbouwster* ».
- (e) The *Provincial Federation of the Hainaut Farmwomen's Clubs*, recently founded, with the object of starting new clubs and encouraging the work of those already in existence.
- (f) The *Provincial Federation of the Luxembourg Clubs*, founded on December 2nd., 1912, with 13 associations.
- (g) The *Provincial Federation of the Namur Farmwomen's Clubs*, with 30 clubs, constituted as professional unions.

§ 3. FARMWOMEN'S CLUBS IN THE PROVINCE OF HAINAUT.

At the 3rd. International Congress of Farmwomen's Clubs, recently held at Ghent, Countess Ponfriard, President of the Celles Club, presented a report on the progress of the farmwomen's clubs in the Province of Hainaut.

*After mentioning De Vuyst, General Manager at the Agricultural Department as promoter of these associations in Belgium, she told the story of the clubs of the province.

The first formed was that of Leuze, founded in 1907, but planned in 1906. It has 211 members and includes the whole territory in its field of action.

The next founded were the Celles Club, provided with a library which can boast of many readers and which is the best supplied with works of professional instruction ; and the Frasnes Club, the second founded in Belgium, which has 139 members. A peculiarity of this club is that the Committee of Management has a representative in every commune of the canton, to collect subscriptions and to obtain new members ; further, in accordance with a principle of decentralisation, it is customary to give the lectures in several communes of the canton, with the twofold object of saving the members' travelling expenses and arranging a more equal distribution of the advantages the members enjoy and the charges they have to support.

We must further mention in this province the Maulde Club (44 members), founded in 1909 in connection with an *école ménagère agricole* ; that of Bruglette, founded in 1910 and progressing rapidly, so that it has 320 members ; and that of Templeuve with 250 members.

Clubs of very recent foundation are those of Vézon (1911), Braine-le-Comte, Merlin l'Évêque and Erbisoel (1912). The organization of all

these clubs is almost the same (contributions, full members, honorary members and patrons) and they pursue the same educational and professional object, consisting in extending and completing the culture of the farm women, with the object of rendering them more and more capable of fulfilling their social mission.

The means employed for this purpose are chiefly lectures and the reading of good books.

Considering the object of the meetings of the farm women in the last six years, it is easy to see how the clubs we are dealing with have always acted on the principle of uniting in each sitting, with professional or scientific instruction, also moral or religious teaching, by means of the careful selection of the subjects of the lectures. This is seen in the following list of lectures given between 1907 and 1912 in the Hainaut Farmwomen's Clubs:

Lectures delivered at the Meetings of the Farmwomen's Clubs of the Province of Hainaut, 1907-1912.

- The farm in history.
- The hygiene of the farm.
- Improvements to be introduced on the farm.
- Lighting of the farm.
- Livestock improvement and its future.
- The fight against aphthous stomatitis.
- Care to be taken in dairying.
- The hygiene of the cattle stalls.
- Microbes in milk.
- Butter making.
- Poultry improvement
- Gardening
- Horticulture.
- Preservation of vegetables.
- The farmwoman's duties as wife.
- The farmwoman's social duties.
- The farmwoman's day.
- Household education.
- Health of babies.
- Babies' sleep and food.
- Teething, tuberculosis.
- The development of the will in children.
- Badly trained children.
- An apostleship to be exercised : anti-alcoholism.
- The care of the wounded.
- A new defence against hail.
- A journey to the Holy Land, with lantern slides.
- Patriotism and the mothers.

The moral and religious subjects as also everything of the nature of recreation (moving pictures, lime light views etc. etc.) are usually entrusted to priests. The others of technical character are, instead, dealt with, according to circumstances, by doctors, lawyers, schoolmasters and State scientific agriculturists.

We think, finally, that it will be interesting to reproduce the desire expressed at the Ghent Congress, in relation to the clubs of the province of Hainaut, by Countess Pontbriand. They were :

1st. That the above clubs may above all keep faithful to the line of conduct marked out at their foundation, that is to say, may always include in their programme both professional and moral or religious education.

2nd. That the lime light views and moving pictures, exhibited in these clubs, even if intended for purposes of recreation, may always have for their object that of developing the sense of the true, the beautiful and the good.

3rd. That the farmwomen adhering may always become, in a greater degree, participants in the advantages offered by the professional union and mutual institutions.

4th. That the number of honorary members and patrons may increase

* * *

The results of these interesting women's organizations in Belgium have been most happy. As is seen in the various publications and reports dealing with the matter, the farmwomen flock most eagerly to the meetings, take keen interest in the lectures and derive great profit from them : this appears in no doubtful manner in the considerable progress already observed in poultry improvement, dairying, gardening, preparation of preserves and finally in every department in which woman's action is prominent.

SPAIN.

CO-OPERATION AMONG THE GROWERS OF CITRUS FRUITS IN SPAIN.

By Señor J. MANUEL PRIETO,
Professor of the Special School of Agricultural Engineers, at Madrid.

§ I. ANTECEDENT EVENTS.

No kind of farming has made such rapid progress in Spain and produced such considerable wealth as the cultivation of citrus fruits. While it remained almost stationary until about the last quarter of last century, the attraction of the English market, facilitated by commercial means of communication in accordance with mutual and increasing necessities, stimulated plantation in our Mediterranean region, above all in the provinces of Valenza and Castellón, where the water supply as well as the activity and intelligence of the population in respect to agriculture facilitated this class of undertaking.

Economic circumstances have, during the last forty years, encouraged this agricultural development which has increased fivefold the area planted with oranges in the Eastern districts and raised the value of the production to a hundred million pesetas. But when the due limit was passed, there came years of difficulty (1907 and 1908), when exportation was not easy, fruit lots found no purchasers and sales were hardly remunerative. From an average of 15 pesetas per hundred kilogrammes, the price fell to 10 pesetas, which was really ruinous, and even below that. The orange crisis presented itself in a threatening form and called for immediate remedies.

People spoke of over production, and indeed that did exist, at least when the actual requirements of the export trade are considered. Not only had the plantation fever rapidly increased the crop but, in addition, the cost price of a part of the crop produced on land little suited for the purpose and requiring a large expenditure for its preparation, was excessive. But according to many, the principal cause was the defective organization of the export. It had developed without any order or any intervention on the part of the producers. Really the latter were only anxious to ship as soon as possible, so as to benefit by the high prices paid to the first

comers, sometimes neglecting for the purpose the quality of the fruit. The export firms, which were almost all foreign, only desired to secure profits, and the intermediaries to ship large quantities of fruit, in order to increase their commissions. The consequent disorganization and irregularity of the trade led to very sudden variations in price on the principal markets, as is seen from the fact that in one of the last few years the season, which opened in London with the encouraging price of 20 pesetas a thousand, became disastrous a few months later and the fruit was sold retail at 5 pesetas.

The unsatisfactory situation seriously alarmed the whole producing class of the district of Valenza and all the financial classes connected with the production. The most competent persons who publicly occupied themselves with the problem declared that the evil was not due to the glutting of the market, but to the unsatisfactory conditions under which the export was effected and the fruit received and distributed, and proposed the foundation of an organization by means of which to avoid all these errors, for which in part the producers themselves were responsible. For the purpose it was necessary for the latter to unite and associate, but the individualistic character of the farmer of the district of Valenza constituted an extraordinary difficulty.

Happily, the agricultural movement, developed as a consequence of our colonial wars, had already given birth, to active agricultural associations in all our provinces.

The action of a group of scientific farmers and patriotic landowner incited the producers towards this, at the same time as it inspired official provisions calculated to promote the idea. The union of the majority of these associations in regional federations is of recent date, and the Federation of the East, skilfully directed by presidents chosen from among the most distinguished and most enthusiastic personages of the above group has acquired special importance and shown exemplary activity. In the Board of Management of this Federation, at Valenza, and in the Agricultural Chamber of the same city, the desires of the producers found a faithful echo, authorized opinions facilities for their propagation and made of action a lever for their activity.

The first public act in which these aspirations were formulated and agreements entered into was the meeting held by the Federation in January 1908, at Alcira, where, the following conclusion was come to amongst others

"(4) To invite the Agricultural Federation of the East to promote the general association of orange producers, under the form of co-operative societies or syndicates adequately organized and possessing the necessary means for the defence of this branch of agricultural production."

The meeting held a little later at Valenza confirmed this resolution supported besides by the farmers assembled a few days later at Burriana a very important centre for the production of oranges in the Castellón district.

In that province there already existed some organizations of syndicated producers, working nearly in the usual way. The presidents of these

associations, together with the members of the Regional Council of the Agricultural Federation of the East, were charged to carry into effect the above agreement.

The Valenza regional show also promoted contact among the producers, and profit was taken of it to extend the idea of association among the orange growers.

In spite of all these favourable circumstances, it was none the less a difficult matter to overcome the obstinate opposition of the farmers so as to induce them to sacrifice their independence to the common advantage.

The work of the organizers was also disturbed by the conflict of opposing opinions. Some wanted association to be made compulsory by law; others, more reasonable, were ready to allow it to be free and voluntary. There were disputes also as to the objects of the society, some wishing to limit its action to the packing and sale of oranges, others urging that it should undertake all the business involved in the production, the purchase of manure and implements included. Intelligent and impartial persons joined in the discussion. Dr. Lassala, president of the Agricultural Federation, especially spoke with authority and maintained in the meetings and in his writings the spirit of union the first assemblies had given birth to and guided it towards the solutions indicated by the causes of the crisis themselves. He was effectually seconded by enthusiastic personages of the province of Valenza, amongst others by Señores Lettier and Sarthon, the latter being Secretary of one of the organized co-operative societies at Villareal. Their intervention and the good working of this co-operative society and other societies in the district called Plana de Castellón caused the triumph of the idea of a voluntary association for the sale of the crops.

§ 2. THE ORGANIZATION OF THE CO-OPERATIVE SOCIETIES FOR THE SALE OF ORANGES AND THEIR FEDERATION.

We shall give here a summary of the principal provisions in the Regulations of the *Sindicato naranjero de Villareal*, which has served as a model for a large number of co-operative societies of later foundation.

The syndicate was formed according to the law of January 28th., 1906, with the object of uniting, despatching and selling collectively the crops gathered by its members. A minimum of 10 members is necessary for the society to work; the members may leave the society when they desire to.

Any member may claim that the syndicate shall undertake the export and sale of his crop under the conditions laid down in the Regulations. He is bound on his side to declare the numbers of his orange trees.

Every year before the season commences, the syndicate opens a register in which all holdings that the members register with the approval of the Board of Management are entered, numbered and described, with indication of their area and other characteristics. In no case may member

reserve the right to sell to another association or any other person oranges produced on a holding registered in the Syndicate's register.

At the beginning of harvest, each member must declare the amount of oranges on each of his holdings and these amounts shall be entered in the register. By the mere fact of this registration, the oranges cease to be his private property. They belong to the society and may be disposed of by the Board of Management, even in case of transfer of the holdings on which they were produced.

Every year the Board of Management shall fix a price for each class of fruit which will remain invariable for the whole season. As the oranges are gathered and counted, they will be classified as choice fruit, first, second and third class fruit. This classification is made before the gathering of the fruit, by two experts appointed by the Board of Management.

The crop will be gathered either all at once, or different portions at different times, under the conditions fixed by the Board of Management, according to the area of the plantation, the class of fruit, its maturity and other circumstances. To each proprietor a receipt will be forwarded every day showing the quantity of oranges gathered on his land and the price per thousand. To the price per thousand oranges there will be added from the first of February and after, a certain sum fixed in accordance with a graduated scale every year at the first general meeting, by way of compensation for waste and damage.

In the final distribution of profits and losses no account is taken of this compensation.

The syndicate will do its utmost in order that all the fruit of the members may be gathered by May 31st.

When the syndicate has funds available, it will pay its members amounts corresponding with those for the sale of the fruit in accordance with their respective receipts, less from 10 to 30%, which will be paid at the final settlement. When this has been effected, all the engagements of the society will be settled out of the total amount of the funds, consisting of the excess of the yield from the sale of the oranges together with the amount retained from the payments due to members as above mentioned.

The balance of the profits, as also the losses, if there are any, will be distributed among the members in proportion to the capital contributed by them to the association. The syndicates are managed by Boards with very extensive duties of which they must give account to the General Meeting. There is an ordinary general meeting twice a year; once in the month of October to settle the plan of campaign and appoint the Board of Management, and one after the export season to settle the accounts.

The new co-operative societies were not formed as rapidly as the enthusiasm of the propagandists deserved.* However, at the end of 1909, besides the older societies of Castellón (2), Almazora, Burriana and Villa-real (2), new societies were working at Onda, Sagunto, Petrés, Orihuela (2), Nules and Benavites.

The second part of the work had still to be arranged, that is the union of all the syndicates in a collective action for exportation, prepared by

the persons already mentioned, convinced that the economic solution sought could only be realised by the foundation of commercial organizations, similar to the German trusts, for placing on the market and selling the whole produce of their members. The study of the markets, the foundation of importing firms dependent on the producers' society, the distribution and regulation of despatch must be the principal means by which profits are made. The State was only asked to authorize its official agents abroad to furnish information and organize a special mission at its own expense.

After hardly four years these different objects seem to have been attained. The orange growers' federation is an accomplished fact. It includes 16 co-operative societies disposing of about the fifth part of the total export of Spanish oranges, produced by about a thousand associated powers.

The regulations of the association assign to it, in addition to the aims common to all agricultural syndicates, the following special objects:

- (1) Collective purchase of material for the despatch of the fruit;
- (2) Mutual insurance against transport risks;
- (3) Organization of transport;
- (4) Foundation of agencies for sale in foreign countries;
- (5) Study and defence of the agricultural interests of the organizations composing the Federation;
- (6) Organization of commercial missions to visit the markets at home and abroad.

Almost the whole of this programme is being carried out. Thus, the board of the Federation makes an agreement with a contractor for the shipping of the fruit; it arranges with the navigation companies with regard to the number of boats they will keep available for it in different seasons and arrange for the placing of the produce on the various markets. The Federation has agents at the four most important markets and they receive the assignments and arrange for the sale. So that the business has ceased to be for the most part in the hands of foreigners. The monopoly of English and German firms which could not make their interests immunise with those of the producers is over.

The satisfaction of the existing members is a reason for assuming that their number will increase from year to year. To the efforts of the members is due the free import of the wooden boxes for the oranges as well as the final abolition of the former tax on the transport of fruit by sea. Mutual marine insurance will soon be an accomplished fact.

The federation, by its action, has even opened new horizons for Spanish production; causing the opening of new markets like that of Russia, hitherto not directly served, and the introduction of industries in connection with citrus produce, such as the manufacture of citric acid.

These are the results of which the patriotic promoters of the orange growers' federation, the most definite and brilliant manifestation of co-operation in Spanish agriculture, may boast.

2. MISCELLANEOUS NEWS.

I.—THE FORMATION OF THE LA RIOJA VINE GROWERS' ASSOCIATION
— Recently a meeting was held at Logroño attended by all the vine growers of La Rioja and more than sixty representatives of agricultural syndicates. The object of the meeting was the formation of an association for the defence and advancement of the interests of the viticulturists and wine farmers of the region, by combating the imitation and adulteration of the famous musts of la Rioja and urging the authorities to adopt measures for the defence of the above interests.

In conformity with these ideas, corresponding with the real necessities of La Rioja, as the produce of the vine is perhaps the most important factor in the economic life of the region, the above mentioned meeting founded the *La Rioja Viticulturists' Association*.

The objects of the Association are various, but it will especially devote itself to : (a) preventing the imitation and adulteration of wines, employing every legal means to prevent the sale of imitations and adulterated wines ; (b) intervening directly or by means of Parliamentary representatives in the discussion of measures relating to the customs dues (c) requesting the Government to study and conclude commercial treaties favouring wines ; (d) asking the carrying trade for improvements rendering transport quicker and cheaper ; (e) after the standard of the wine of la Rioja has once been fixed, preventing by all the means in its power the produce of other provinces being sold as *La Rioja wine* ; whether such wines are made in the district in which the grapes grow or elsewhere, they may bear the label "*Rioja Type*", but must also show the place of their origin (f) exercising such action of a legal character the circumstances may demand for the protection of the wine and the legal regional trade marks ; on those shall be considered legal trade marks that are duly registered in the special office for the purpose in the Department of Agriculture, Industry and Commerce ; (h) establishing agreements among the Spanish viticulturist in regard to all that tends to benefit the entire class and viticulture and wine-making generally.

The members of the La Rioja Viticulturists' Association must be landholders or wine farmers of the region.

The duties of the members are: (1st.) to pay an entrance fee and so much per *cantara* of 16 litres, or per two *arrobas* of grapes of 11 ½ kgs. at every vintage, as the association shall decide ; (2nd.) to declare the exact number of vines each possesses and to inform the Association of new plantation started ; (3rd.) to inform it also at the end of the vintage of the number of

tinturas of wine made and *arroyobas* of grapes gathered; (4th.) to inform their respective delegates of adulterations and unauthorized use of wine trademarks that have come to their knowledge.

The share capital is formed:

(a) of the members' entrance fees:

(b) of the amounts the meeting determines the members shall pay per *tintura* of wine made or two *arroyobas* of grapes gathered at the vintage;

(c) of the part the association may receive of the fines imposed on sellers of wines adulterated, or imitated or sold with labels giving false information in regard to the name, origin and nature of the wine.

These special funds will be in preference used for the prosecution of those who imitate and adulterate wines and make use of trade marks without authorization, and also for payment for analyses, grants of subventions to municipal laboratories, payment of inspectors when their work is necessary and of legal expenses, publication in the papers of the names of dealers in adulterated and imitated wines and generally whatever is necessary for the defence of the la Roja wines.

These are the principal provisions of the Rules approved at the meeting. It was also approved that the entrance fee should be from 1 to 10 pesetas and that at the next vintage the members should pay 1 centime per *cinta* of wine made or two *arroyobas* of grapes gathered.

(Summarised from *La Rioja*, Newspaper of Logroño).

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2. — THE LEO XIII PEOPLE'S BANK AND ITS WORK IN BEHALF OF CO-OPERATIVE SOCIETIES. — This institution, which has been working little more than eight years was founded for the extension of popular co-operative credit among the Spanish workmen and especially among peasants. The Leo XIII Bank was founded with a capital of 500,000 pesetas, on the initiative of the National Council of the Catholic Workers' Co-operative Societies: its character is therefore denominational.

Up to December 31st., 1912, the Bank had granted loans to the amount 1,971,911 pesetas, distributed among 117 organizations and associations scattered over the whole country (1).

The accounts for the year 1912 closed with a profit of 6,440 pesetas. In the same year the loans amounted to 466,515 pesetas and 424,260 pesetas were repaid. The following table shows the operations of the Bank for each year since its foundation:

(1) On a future occasion we shall deal in detail with the organisation and work of the Leo XIII People's Bank.

Years	Loans Granted	Loans Repaid	Loans in Course at End of Year
1905	34,583	4,012	30,571
1906	92,547	47,194	75,924
1907	157,455	110,811	122,567
1908	186,906	134,207	175,266
1909	297,925	234,331	238,859
1910	324,980	280,431	238,408
1911	411,000	317,650	576,757
1912	456,515	420,260	419,012
Total . . .	1,971,911	1,552,896	

From these figures, we see that in 1912 the bank made loans of a total amount of 456,515 pesetas, showing an increase of 55,515 pesetas as compared with the previous year. At the same time the repayments increased from 317,650 to 420,260 pesetas. The current accounts also increased. 86 bonds for an amount of 43,000 at 4 % were taken up.

(Summarised from the *Revista Católica de Cuestiones Sociales*, Madrid).

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3.—THE 4TH. GALICIAN AGRICULTURAL MEETING.—The meeting recently held at Rivadavia (Orense) was the fourth held by the Galician agricultural associations. This meeting was one of the most important, both on account of the number of representatives of the agricultural and livestock improvement associations and for its programme of work.

Many and complex problems were treated at it; we shall mention those that are of greatest interest from the point of view of agricultural economy, passing over those that concern the technique of agriculture.

1. *Transport and Tarifs.*—One of the subjects discussed regarded the most practical means for promoting an agreement among the societies and various corporations of agricultural character in Spain, the Chambers of Commerce, the mining societies etc., for the purpose of inducing the Government to a radical and complete change of the tarifs and the regulations regarding transport, which are now a serious obstacle to the development of the country. The meeting, in consideration of the great importance of the matter, which is not confined to the region, decided on the

ppointment of a Commission, which, together with the Chambers of Commerce, Syndicates and other agricultural corporations, might ask the Government for a reduction of the present transport rates, as a result of a comparative study of the tariffs of other countries. The discussion of this question was closed with the further affirmation of the necessity of nationalising the existing means of communication, completely changing the Government railway policy, in the future building all railway lines for the account of the State, and preventing at any cost the renewal of concessions to companies.

2. *Progress of Agriculture and Agricultural Education.* — The subject proposed for consideration by the Arnoya Agricultural Society, namely the state of the small agricultural development of Galicia and the most efficacious means for extending it was the object of learned discussion, in which the special importance of the education of the peasants was clearly shown. The following decisions were come to :

- (1st.) To ask for the institution of itinerant agricultural education ;
- (2nd.) To increase the organization, development and working of the agricultural societies by means of a uniform system of regulations ;
- (3rd.) To increase competitions among livestock improvers and the use of chemical manure, petitioning the State to place on the Estimates larger amounts for subventions to these competitions and to distribute chemical manure to the agricultural societies free of charge in certain quantities and also some model machines for purposes of experiment ;
- (4th.) To request the Minister of Agriculture, Industry and Commerce to increase the subventions for prizes to farmers, livestock improvers and labourers who most distinguish themselves in agriculture and livestock improvement.

3. *Agricultural Association.* — The subject of the "practical means for increasing the agricultural associations in Galicia" had also its special interest.

After an examination of the various types of agricultural associations in Galicia with reference to their action in conformity with the law on associations and agricultural syndicates, and the condition of the peasant, according as he is a member of associations regulated by law or by private agreement, or does not belong to any association, the meeting agreed in recognising that the most practical type of association for the Galician peasant is the agricultural syndicate, the district of which is a commune and in which there are local and parochial sections. As the agricultural syndicate, in accordance with the 1906 law, aims at all the objects the Galician peasant has in view in entering into an association, the meeting recognised that it was desirable that all the societies not constituted in accordance with the above law should be transformed into syndicates and decided to enter upon an energetic campaign for this end. It also decided to appeal to the land holders and persons possessing academic degrees resident in the country to assist the syndicates in the education of the peasant.

4. "Foro." — One of the most important subjects discussed at the meeting was the ownership of the land, especially "the necessity of

persistent collective action to obtain from Government the speedy promulgation of a law for the compulsory redemption of the charges on the land held by emphyteusis and subemphyteusis and other similar charges."

The miserable position of the Galician peasant due to the excessive subdivision of land is well known, and it is also known that this extraordinary subdivision has its origin in an institution of land tenure peculiar to the region, which has given rise to the most varied discussions and theories. This institution is the *foro* (a kind of emphyteusis), which consists in the possession and cession for a long period of a farm in return for a quitrent stipulated by mutual agreement in advance (1). The seriousness of the position is not so much in the character of the contract, which after all presents a considerable analogy with the Justinian emphyteusis, but rather in the incredible division of the *foro* due to the famous *Pragmática del Interin* promulgated by Carlos III in 1763, which, suspending any action for redemption of the land by the proprietors, tacitly admitted the right of the tenants to keep possession of it; the consequence of this was that they considering themselves secure in their rights, gave, let us so express it, by a contract of subemphyteusis (*subforo*), a portion or the whole of the land to other tenants. This operation being repeated *ad infinitum* has given rise to subemphyteusis of the first, second, third, and even other degrees.

The consequence of this process is that the land is subdivided to an incredible extent and its price is very high.

Besides this interminable division of emphyteusis and subemphyteusis has brought with it a most complicated system of judicial machinery consisting in the operations of surveying, *laudemium*, etc., (apeo, prorrato, tanto, retracto, comiso etc.) which is one of the causes of the ruin and discontent of the landed proprietor.

Now for a very long time there have been two diametrically opposing tendencies manifested for putting an end to this intolerable position. One of these tendencies favours the landlord, the other the emphyteuta. The first consists in the full recognition of the landlord's direct right and implies the transfer of the land; that is to say its restitution to the landlord.

This solution, which would have plunged the rural population of the region in the deepest misery and would have obliged them to emigrate, was arrested at the start by Carlos III by the above *Pragmática* which created a new position intended to be transitory and only to last till the Government had solved the problem, but which afterwards became permanent.

The second solution is to give preference rights to the tenant's possession consolidated by means of the labour that attaches the peasant indissolubly to the soil, arranging that the emphyteuta may be converted into proprietor and may redeem the emphyteusis.

In view of the opposition of these two tendencies and the energy with which the land holders and emphyteutas respectively maintain their rights

(1) We shall deal with the historical and legal constitution of this institution, as with its results and present situation in a future study on this and other land institutions peculiar to Spain.

it will be understood how difficult it must be for the law to solve so hard a problem, and this is why more than a century has passed since the *Pragmatica* of Carlos III without any Government having been able to change the *status quo*, in spite of many attempts.

Thus it is evident, however, that the present land system of Galicia is absolutely unendurable and most injurious to the interests both of the proprietor and the emphyteuta; therefore, public opinion is unanimous in calling for a radical reform.

The Society of Teis has taken the initiative in redeeming the emphytenses in Galicia; however, all the agricultural societies of the region have appointed Boards with ample powers for the redemption of these leases. The principal decisions of the meeting with regard to the question of emphytensis were the following: (a) to ask the Government for the speedy promulgation of an equitable law with regard to the redemption of *foros*; (b) to recommend the executive council of the meeting to collect suggestions from the agricultural corporations of the region and the objections they think it desirable to make to the proposal the Government brings forward and, in agreement with the Teis Council, to bring these suggestions and objections to the knowledge of the Government in the most suitable manner.

(Summarised from *Progreso agrícola y pecuario*, Madrid).

UNITED STATES.

I. THE LEGAL STATUS OF FARMERS' CO-OPERATIVE ASSOCIATIONS.

SOURCES:

- BARNETT (George E.): State Banks and Trust Companies. National Monetary Commission, 1911.
- POWELL (G. H.): Co-operation in Agriculture. New York, 1913.
- KEMMERER (E. W.): Agricultural Credit in the United States. The American Economic Review, Vol. II, No. 4, 1912.
- GREEN (J. B.): Law for the American Farmer. The Rural Science Series, New York, 1911.
- JEFFREY (J. W.): Indispensable Law. The California Cultivator, June 5, 1913.

§ I. THE DIFFICULTIES OF ORGANISING UNDER EXISTING LAWS.

The granting of charters to business corporations in the United States is a matter for legislation by individual states, not a federal right. Only a small number of states have made special provision for the registration of co-operative societies so that farmers' business organisations, in common with other co-operative enterprises, meet with considerable difficulty when the question arises of acquiring definite legal status. An association with a limited number of members, well known to one another, may for a time continue to do business satisfactorily without seeking incorporation, and a very large number of such loose organisations exist, each one necessarily confining its operations to a small area. With a large membership and a wide field of action the moral guarantees which ensure the success of a small local association are so weakened, that the organisation must acquire the security of legal form or quickly break down. It has no alternative, therefore, but to incorporate under the ordinary company law of its own state.

It may, indeed, obtain a charter as a "non-profit corporation", but such legal recognition, adapted to scientific or charitable institutions, is not adequate to the needs of a business organisation which must have such control over its members as will enable it to deal successfully with difficult financial and administrative questions. Farmers' co-operative associations are "non-profit corporations" only in the sense that profits are not divided

on the basis of invested capital; but they are very definitely "profit-earning corporations", the profits of which are distributed among contributing members as rebates on the price of the service performed, or in the form of additional services rendered gratuitously. Even the capital invested in a co-operative enterprise must earn about the same rate of interest as capital invested in any other undertaking of equal risk, though beyond that it has no claim. The voting power in a co-operative association, when it is not equal, is usually determined by the member's direct interest in the service rendered, but the association must earn profits for its members in one form or another or there is no reason for its existence. To legalize a farmers' business organisation, therefore, on the same level as a scientific institute or a philanthropic society is to place it in an obviously false position.

The majority of farmers' associations are for this reason incorporated in the ordinary way as joint-stock companies; but here again their position is unsatisfactory. Existing state laws provide for the formation and management of companies intended to earn pecuniary profits for the capital invested, and, as no basis of control other than the amount of capital subscribed has ever been contemplated, it often happens, under ordinary company law, that neither the rights nor the obligations of members of a co-operative society are clearly defined. Such a society must have the right to make the voting power of members equal, or in ratio to the amount of produce contributed or the service rendered; and it must be able to control the transfer of shares in order to ensure that every member shall be a producer directly interested in the services which the society performs.

Under the ordinary laws no co-operative association would be legally empowered to enforce such restrictions. The ownership of shares confers a proportional power of voting, and the right to sell and transfer freely is incidental to ownership. It is possible, therefore, for the control of a co-operative association to pass completely out of the hands of the producers whom it was formed to benefit, and when associations are incorporated as joint-stock companies there is no legal way in which such a result can be avoided.

Again there is no legal means whereby a member may be separated from the association when he ceases to be a contributing producer. He may sell his farm and retain his shares, either because he wishes to, or because the association has not the funds to repurchase them and cannot, in any case, be compelled to do so. He may even join a rival organisation, and as a shareholder in the first have the right of access to its books, while on the other hand he may suffer the hardship of being assessed as a shareholder in the original society though he no longer enjoys the benefit of its services.

A co-operative society generally attempts to safeguard its interests by the adoption of bye-laws intended to meet its particular needs, and in practice matters often work smoothly in spite of the anomalous legal position.

Unless, however, co-operative associations are specially empowered to incorporate such bye-laws in their constitution, as is the case in Nebraska, they enjoy no additional security of status. Members may agree to be re-

gulated in their conduct by a whole series of bye-laws, but it is evident that an association cannot compel a member to observe a bye-law which conflicts with any right conferred on him by state or federal laws.

Co-operative credit associations form a special case, since the business of banking in practically every state is regulated either by general bank acts, or by special acts which grant incorporation separately to each bank. There is a fixed minimum capital without which no bank may be incorporated, varying from 5,000 dollars in North Carolina to 50,000 dollars in New Jersey, but ranging as a rule between 10,000 and 25,000 dollars. This provision alone impedes the formation of co-operative credit societies, apart from the fact that the elaborate regulations of existing bank acts have no reference to their special case. Farmers' credit unions propose to transact a type of business at present, it is stated, practically untouched by the existing banking system, and it is natural to infer that the new element will call for some modification in existing laws, or for fresh legislation. So far the creation of co-operative credit unions is provided for in two states only in Massachusetts and in Texas. Up to March 14, 1912, out of 22 unions which had been organised in Massachusetts since the passing of the act in 1909, none of them were among farmers, while the Texas act only came into operation on July 1st. of this year. The pioneer rural credit unions in the United States were founded by the Jewish Agricultural and Industrial Aid Society, in 1911, and are all voluntary or unincorporated associations.

Mutual insurance companies must conform to the insurance laws of the state, and are subject to the same supervision as is exercised over ordinary insurance companies. Their operations are generally confined to a township or county, and the kinds of property which they may insure are usually defined by law in the interests of the members themselves. A number of states have passed special laws regulating their formation and management, and in some cases placing a limit on the amount of insurance which they may underwrite on any single risk. Mutual companies which have extended their operations to a whole state, or have attempted inter-state insurance business have as a rule been unsuccessful, and have often ended in litigation with the members for the collection of assessments which the latter regarded as excessive. Legislation, as we have seen, has been directed to ensuring greater safety by imposing reasonable restriction on the business of mutual companies.

New legislation is needed in most of the states to simplify the organisation of co-operative associations and to give them definite legal status. It is not improbable that the federal government will make provision for the legalization of some form of co-operative credit associations, the control of all credit institutions being in a special measure a function of the central government.

§ 2. SPECIAL LAWS DEALING WITH CO-OPERATIVE ASSOCIATIONS
IN CERTAIN STATES.

(a) *California.*

Co-operative business associations were legalized in California as far back as 1877, in which year a short act gave such associations the right to divide the profits of the business among persons other than stockholders. It was not till 1905 that an act was passed which regulated their constitution and defined their rights and obligations. For the first time they were authorised to incorporate without capital stock, but they could be formed for profit or not, at the option of the promoters. After 1905, the conception of co-operative associations as rigidly non-profit gained ground rapidly, and defects were revealed in the act, which it was found, made no provision for the rights of withdrawing members. This led to the passing of the very incomplete Act of 1909 which forms Title 21 of the Civil Code, and deals with the organisation and management of "agricultural, viticultural and horticultural non-profit associations". The first section empowers any one or more persons engaged in the production, preserving, drying, packing, shipping or marketing of agricultural products to form a non-profit co-operative association under the provisions of the Act. The important section 653 provides that such an association shall have no capital stock, and shall not be conducted for profit; any person or number of persons may become members upon the conditions and subject to such rules and regulations as are prescribed in the bye-laws of the association; a certificate of membership shall be issued to each member, but no certificate or membership rights shall be assigned by a member to any other person except by consent of the board of directors, and the association shall have the right to provide in its bye-laws, for or against such transfer, and to prescribe the terms upon which such transfer shall be allowed.

Section 653 O stipulates that the articles of association must state whether the voting power and property rights of members shall be equal, and if unequal, the general rule or rules applicable to all members by which such voting power and property rights shall be determined.

Section 653 P authorises an association to adopt bye-laws prescribing the membership fee and the annual dues to be paid by members; the number of members, and the conditions precedent to membership; the method, time and manner of permitting members to withdraw, the method of determining the value of the interest of withdrawing members, and the purchase of such interest at the option of the association.

Each association shall also have power: "To appoint such agents as a business may require; to admit persons to membership and to expel any member pursuant to the provisions of its bye-laws; to forfeit the membership of any member for violation of any agreement between him and the association, or for his violation of its bye-laws.

"To purchase or otherwise acquire, hold, own, sell and otherwise dispose of, any and every kind of real and personal property necessary to carry on its business.

"To co-operate with any other association or associations, upon the assent of members representing at least two-thirds of the total votes, and to unite with other associations to employ and use the same methods, means, and agencies for conducting business".

These are the provisions of the law relating to co-operative associations connected with agriculture. The organisation of other co-operative associations is provided for under Title 22 of the Civil Code which empowers any three or more persons to form a non-profit, co-operative corporation without prescribing or limiting in any way the nature of the business they may undertake. By complying with the non-profit conditions of this law any group of farmers would be free to form a railway, telegraph, or telephone company, or engage in any form of mutual insurance.

Many farmers' organisations already incorporated are naturally seeking a way to place themselves under the operation of the new laws. Unfortunately re-organisation is not an easy matter. Where possible it is effected by amending the original articles of incorporation; when these articles are not susceptible of amendment the corporation has to be dissolved and a new non-profit association formed to take over the whole of its property and interests. The work of liquidating the rights of the old membership and adjusting individual interests in the new, presents considerable difficulty and may occupy much time.

(b) *Wisconsin.*

The Wisconsin Law (Chapter 368, Laws of 1911) provides for the formation of associations or societies "for the purpose of conducting agricultural, dairy, mercantile, mining or manufacturing business on the co-operative plan."

Any association so formed may buy, sell, and deal in the products of any other co-operative association. No stockholder shall own shares of a greater par value than one thousand dollars, nor be entitled to more than one vote.

Subject to revision by the association, the earnings shall be allotted in the following proportions: "to the paid-up capital stock a dividend not to exceed six per cent; not less than ten per cent. of the net profits to a reserve fund, until that fund shall be equal to thirty per cent. of the paid-up capital, and five per cent. thereafter to an educational fund to be used in teaching co-operation; the remainder of the net profits in uniform dividends upon the amount of purchases of shareholders, and upon the wages and salaries of employees. The dividend paid to non-shareholders shall be one half of the dividend paid to shareholders. In productive associations such as creameries, dividends shall be paid on the amount of product contributed. In the case of an association engaged in both production and sale, dividends may be paid on material delivered and goods purchased by patrons."

The Law provides that no corporation conducting business for profit, that is to say, purely for the earning of profits on capital, shall be entitled to the use of the term "Co-operative" as part of its corporate or business name.

In Wisconsin as in California the law has been framed with reference to the needs of existing co-operative enterprises. While the California legislators have in mind the fruit growers' selling exchanges which have here reached their highest development, the provisions of the Wisconsin law have more direct application to the many farmers' elevators, creameries and stores which exist in the North Central States.

(c) *Massachusetts.*

Provision is made for the organisation of co-operative associations under a section of the Law of 1903. The section in question reads : "A corporation which is organised for the purpose of co-operation in carrying on any business, and of co-operative trade, shall distribute its earnings or profits among its workmen, purchasers, and stockholders at such times and in such manner as its bye-laws shall prescribe, but as often at least once in twelve months. No distribution shall be made unless at least ten per cent. of the net profits have been appropriated for a contingent sinking fund until an amount has accumulated equal to thirty per cent. of its capital stock. No person shall hold shares in any such corporation in an amount exceeding one thousand dollars at their par value, nor shall any stockholder be entitled to more than one vote upon any subject."

To Massachusetts, as we already noted, belongs the distinction of being the first state to enact a law authorizing the establishment of credit associations on the lines of the European rural credit unions and popular banks.

The Act (Chapter 419, Laws of 1909) defines credit unions as "co-operative associations formed for promoting thrift among their members", and the qualifications for membership are, as in European countries, honesty, truthfulness in the payment of debts, sobriety and industry.

Loans are made to members either on simple note of hand or against assignment of wages, and generally for three months, renewable for another three months. The capital consists of a variable number of shares of low nominal value; each member must acquire at least one share and may not hold more than a maximum number fixed by the general meeting. The business is conducted by a Board of Directors, a Credit Committee and a Supervisory Committee. The Board has extensive powers. It may refuse admission to an applicant, or order the expulsion of a member, determine the expenses of management, adopt bye-laws relating to organization, propose dividends to be paid, and determine the manner in which the money of the Union shall be invested. The Credit Committee decides on all loans; and the Supervisory Committee checks all funds and watches over all the operations of the association. Such Unions as have been founded are all on a very modest scale, and are confined exclusively to

industrial centres. The fact that none have been formed among farmers can only be explained by the lack of persons with some experience of their working and sufficiently interested in agriculture to undertake the preliminary work of organisation and propaganda.

(d) *Nebraska.*

In Nebraska co-operative associations of every kind are legalized and controlled under the law known as Senate File, No. 88. A co-operative association is defined for the purpose of the act as one which "authorizes the distribution of its earnings in part or wholly on the basis of, or in proportion to, the amount of property bought from or sold to members, or of labour performed, or other service rendered to the corporation". The law confers on every co-operative society the power to regulate and limit the right of stockholders to transfer their stock and to make bye-laws dealing with the management of its affairs, the conditions on which shares may be acquired and held, and the distribution of earnings.

(e) *Texas.*

The recent Texas act, to which reference has already been made, deals with the formation of "Rural Credit Unions" which are defined as co-operative associations formed for the purpose of promoting thrift among members and to enable them, when in need, to obtain for productive purposes moderate loans of money for short periods and at reasonable rates of interest (Sec. 1).

The following are the chief provisions of the act : A Rural Credit Union may receive the savings of its members in payment for shares ; may lend to its members at reasonable rates of interest not to exceed 6 per cent. per annum ; invest as hereinafter provided the funds so accumulated ; and undertake such other activities as its bye-laws may authorize. (Sec. 2).

Ten or more citizens of this state may associate themselves together by articles of agreement, and form a Rural Credit Union and become a corporation upon the approval of the State Banking Board. The Board must be satisfied that the proposed field of operation is favourable to success, and that the standing of the proposed members is such as to give assurance that its affairs will be administered in accordance with the spirit of this Act. The State Commissioner of Banking, or his deputy, shall have authority to examine the accounts books and papers of Rural Credit Unions. (Sec. 4).

No corporation except those incorporated under this act shall be entitled to describe itself in its title as a Rural Credit Union ; all Rural Credit Unions shall keep such books as the State Commissioner of Banking shall deem necessary, and the transactions of such Unions shall be subject to his examination and general supervision. (Sec. 5).

The bye-laws of Rural Credit Unions shall prescribe the qualification for membership ; the conditions on which shares may be paid in, transferred or withdrawn ; and the number of directors, the duties of officers, the date

of the annual meeting, the manner in which members shall be notified etc. (Sec. 6).

All bye-laws as well as all amendments thereto must be approved by the State Commissioner of Banking. (Sec. 7).

The Credit Committee shall approve every loan or advance made by the association; every application for a loan shall be made in writing and shall state the purpose for which the loan is desired, and the security offered. (Sec. 11)

The Supervisory Committee shall inspect the securities, cash and accounts of the association and, by a unanimous vote, may suspend the Credit Committee or any officer elected by the Board of Directors. (Sec. 12).

The capital of an association shall be unlimited in amount (Sec. 13); the surplus funds shall be deposited only in such banks or trust-companies as the Commissioner of Banking shall approve. (Sec. 15).

Before payment of dividend, 20 per cent. of the net profits of each year working shall be set aside to form a reserve fund (Sec. 22).

Upon unanimous recommendation of the Board of Directors an association may be dissolved by vote at a special meeting, provided that at least two-thirds of the members are present at such meeting, and provided that not more than ten members object thereto. A Committee of three shall therupon be elected to liquidate the assets of the association. (Sec. 23).

2. MISCELLANEOUS NEWS.

I. — **FRUIT GROWERS' SUPPLY COMPANY.** — Some years ago California fruit growers, who had been paying 11 cents for orange boxes, were faced with a sudden advance in price to 21 cents, dictated by a combination among the companies owning the saw-mills. To meet this they united to subscribe sufficient capital to purchase mills and operate them for their own benefit. The corporation then formed is now the Fruit Growers' Supply Company, a subsidiary association of the California Fruit Growers' Exchange, the same board of directors and the same general officers acting for both organisations. The shareholders of the supply company are associations of fruit growers; the capital has been subscribed from time to time as required, the local associations being assessed on the basis of the number of boxes marketed through the exchange. Six per cent. is paid on the capital, and the balance, if any, of the year's profits is returned to the associations to be paid over to their members in the form of a rebate on the season's purchases. The company acts as a buying organisation purely; it buys, that is to say, only to cover definite orders in hand. In addition to boxes for fruit it supplies wagons, fertilizers, packing-house requisites, spraying material and heating apparatus for protection against frost. Business is on a strictly cash basis; the members receive the direct benefit of

wholesale prices, lower freight rates, and more economical distribution. The company has never suffered a single loss due to a bad debt, and on the present volume of business, operating expenses amount to only one per cent, while it is calculated that a saving to growers is effected of half-a-million dollars yearly. Since the season of 1909-10 the question of protecting orchards from frost by artificial heating has attracted wide interest among growers and the supply company has collected all the available information and experimented with different kinds of heating apparatus and fuel. It has supplied roughly a million heaters, and its utility and influence as a buying and distributing agency was well illustrated by its success in supplying large quantities of oil at short notice to its members during the sudden frost of last winter. The company co-operated with the oil interests to keep the refineries working night and day, and with the railways to run special oil trains and give emergency preference to this traffic. During the season it distributed close on a thousand carloads of oil, handling in one day as many as 125 cars. Recognizing that the growers must in their own interests provide storage facilities and hold supplies of oil in the fruit districts, the supply company negotiates contracts for its members for the erection of storage tanks when required.

(Summarised from the *California Cultivator*, June 26, 1913).

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2. — CO-OPERATIVE EGG-SELLING IN CALIFORNIA. — A writer in the *California Cultivator* of July 3, 1913, calls attention to the discouraging conditions prevailing in the wholesale egg market and the consequent agitation among poultry-keepers in Sonoma County, the largest egg-producing district in the West. Prices have been falling for some years past as the following table shows :

	N. 1 (cents per dozen)	N. 2
March, 1910	19	17
March, 1911	18 1/2	15 1/2
March, 1912	19	16 1/2
March, 1913	15	13 1/2

From Petaluma, which is the centre of the industry, the shipments of eggs in 1910 reached a total of more than $7 \frac{1}{4}$ million dozen, and those of poultry 76,000 head, so that a large part of the prosperity of the country is dependent on the maintenance of remunerative prices for these products. The present low prices are due to a variety of causes. Glowing descriptions of the huge profits to be made in poultry-keeping have been circulated by speculators with land to sell, with the natural result that hundreds of families have been tempted into the industry. The production of other districts in California has largely increased, and many farmers in Oregon and Washington, disappointed with the results from fruit growing, have turned to poultry rearing. But the conviction has been growing among the producers themselves that the present system of selling to speculative dealers is the real explanation of the unsatisfactory returns to the producer and that the

remedy is co-operative marketing. Dealers buy when production is at its heaviest, paying from 15 to 17 cents a dozen for eggs, which they immediately place in cold storage, and sell a few months later at from 30 to 50 cents. Selling organisations acting independently and adopting different co-operative plans have been formed in various centres of production. One of these, the *Santa Rosa Poultry Producers' Association*, is an incorporated society of two hundred members which, besides selling its members' products collectively, buys poultry and eggs outright from non-members. Sales are made to the highest bidder among the dealers and wholesale merchants.

The *California Poultrymen's Protective Association* is a federation of marketing associations with a combined membership of 600. Through its executive committee it fixes prices and secures pledges from the member associations to sell only at these prices. Obviously, however, in the face of increasing competition, any attempt to fix prices must be only partially successful. The solution of the problem lies rather in improved handling of the products — more careful collection, uniform grading, convenient packing, the establishment (by co-operation among the producers themselves) of cold storage warehouses, and prompter delivery on the wholesale market. California unfortunately has few creameries, so that the system of selling eggs through the local creamery, which has proved so successful in some of the North Central States, cannot be developed here. Production, too, in the Western state is more highly localized, so that the marketing problem is not the same, and the organisation of co-operative marketing associations will probably follow the lines of the fruit growers exchanges already familiar to California.

(Summarised from the *California Cultivator*, July 3, 1913).

* *

3.—CO-OPERATION IN THE CALIFORNIA RAISIN INDUSTRY.—Organisation among growers has in the past met with extraordinary difficulties, and achieved only limited success. The *California Raisin Growers Association*, formed in 1898, played an important part in the industry for six years and was dissolved in 1904 while its successor, the *California Raisin Growers' Company* incorporated in May, 1905, came to grief after a single season. Falling prices, insufficient control over growers, and a certain amount of prejudice against co-operation are given as the causes which contributed to failure.

Another attempt at organisation is now being made, and a new association has been incorporated under the name of the *California Associated Raisin Company*. The company has a capital of one million dollars, of which 910,000 dollars had already been subscribed at the end of May, and has made contracts with 4,564 growers giving it control over 99,417 acres, or about 89 per cent. of the total vine-growing area.

The association has taken the first step necessary to consolidate its position by buying up the remainder of last season's crop still in the hands of the growers, and estimated at 20,000 tons.

At the beginning of June it had bought and stored more than 10,000 tons, at prices appreciably higher than those offered by the independent packers. The great problem which the association has to face is the lack

of packing and selling facilities. Control of the crop is not sufficient as long as the facilities for elaborating and selling the product are in the hands of private firms. The Associated Raisin Company made an attempt to deal with the whole packing trade as a body, but this proving impossible it proceeded to make arrangements with individual firms, with the result that some twenty private packing houses have signed agreements with the company for the marketing of its fruits. Behind the company is the *California Raisin Exchange*, an organization intended to promote the general interests of the raisin industry through systematic advertising, the dissemination of information, the compilation of statistics, and as far as possible through the regulation of prices. The *Exchange* is virtually the parent of the *Associated Company* and it is now actively engaged in launching a new association of dried fruit growers the interests of growers of peaches and apricots having been overlooked when the raisin company was formed. There are besides several independent local co-operative associations among raisin and dried fruit growers — at Santa Ana for instance, and at Santa Paola — and if the various organizations can be united in one general plan as is intended, the industry can without doubt be rescued from its present disastrous position and rendered both profitable and secure.

(Summarised from the *California Grower*, June 7, and the *California Calibrator*, June 11, 1913).

* * *

4. — A CO-OPERATIVE SCHEME FOR ADVERTISING APPLES. — The *International Apple Shippers' Association* has realized the necessity of creating year by year a wider market for the fruit, in view of the fact that the production is constantly increasing as new orchards reach the bearing stage. It has therefore undertaken an advertising scheme on a large scale with the object of popularizing apples as an article of food, and at the same time it conducts a vigorous campaign against exorbitant profits in marketing them, having secured the co-operation of thousands of dealers in consuming centres who rely on increased sales to maintain their profits. The scheme is interesting because of the novel method of raising funds to meet expenses. The association will issue stamps in two denominations, one cent and two cent, and it is intended that every grower or shipper shall affix a one-cent stamp on every box, and a two-cent stamp on every barrel he packs. The stamps will be placed on sale on August 1, in time to create a fund for advertising the new apple crop. The idea has been discussed by growers, shippers and dealers and has met with nothing but approval. The association works solely in the interests of the trade as a whole, not for profit, and the promoters of the stamp scheme are confident that a steady fund will be available for advertising, while the modest contribution per shipment will hardly be felt. The scheme has the advantages of simplicity and fairness. The stamps will be sold through banks and other agencies, and growers and dealers will buy them in such quantities as they require, each therefore contributing to the funds in proportion to the benefit he reaps from the scheme.

(Summarised from the *California Fruit Grower*, June 7, 1913).

FRANCE.

AGRICULTURAL CO-OPERATION IN FRANCE.

A.—CO-OPERATIVE SOCIETIES FOR PRODUCTION, TRANSFORMATION, PRESERVATION AND SALE (Conclusion).

VI.—OIL MILLS.

One of the most essential characteristics of the 1906 law, perhaps the most essential, is its flexibility and its adaptability. The following tables show its manifold applications: there is, so to say, no form of agricultural activity which the law has not been invoked to assist.

In the departments of the South the farmers have had recourse to it in order to build oil mills and sell the oil collectively. By means of State advances small producers have been able to equip themselves completely and to deliver table oils to consumers, principally co-operative distributive societies, at the same time as they delivered to the trade *huiles d'enter et de ressouces* (oils obtained from the marc of olives), the pulp and the residuum, etc. The profits of these producers have increased appreciably and, on the other hand, the consumers are certain of buying produce of excellent quality that the oil making co-operative societies are able to produce by means of the improved equipment the State advances enable them to acquire.

[1] See *Bulletin of Economic and Social Intelligence* for April, June and August, 1913. It reminds our readers that the text of this study has been sent to us directly by the French Government.

TABLE

Name of the Co-operative Society	Date of Establishment	Duration of Agreement	Form	Paid up Capital
Co-op. Society of Bandol, Sanary (Var)	April 2nd., 1911	50 years	Civil	9,2
— " La Vannage at Caveirac (Gard) .	March 5th., 1911	30 "	do.	8,5
— of Flayosc (Var)	August 2nd., 1908	Unlimited	do.	13,8
— of Gillette (Alpes-Maritimes) . .	Oct. 17th., 1903	30 years	do.	10,0
Grassoise Olive Growing Co-operative Society at Grasse (Alpes-Maritimes)	Feb. 28th., 1904	90 "	Commercial	19,5
Co-operative Society of Lambesc (Bouches-du-Rhône)	Nov. 29th., 1908	Unlimited	do.	3,0
— of Levens (Alpes-Maritimes) . . .	Oct. 15th., 1905	90 "	do.	16,0
— of Martigues (Bouches-du Rhône)	Nov. 14th., 1909	Unlimited	do.	10,0
Olive Growing Co-operative Society of the Region of Gard at Nîmes . .	August 11th., 1910	do.	Civil	21,0
Co-operative Society of la Roque-Crusanne (Var)	Nov. 1st., 1906	30 years	Commercial	3,1
— Vinsoise at Vins (Var)	July 25th., 1910	30 "	Civil	2,3
				116,6

VII. — VINE AND OLIVE GROWING SOCIETIES.

In the region of the South there are also co-operative societies for the cultivation of both the vine and the olive tree and the State advances have

TABLE VII. — I

Name of the Co-operative Society	Date of Establishment	Duration of Agreement	Form	Paid up Capital
Agricultural Co-operative Society of Cottignac (Var)	April 2nd., 1905	Unlimited	Commercial	34,2
Co-operative Society " La Travailleuse of Cottignac (Var)	August 27th., 1907	do.	do.	22,6
— " La Solidarité des Travailleurs d'Entrecasteaux " (Var)	July 19th., 1908	30 years	Civil	5,0
— of Monfort-sur-Argens (Var) . .	August 23rd., 1908	Unlimited	Commercial	3,5
— " La Montfortaise " at Montfort-sur Argens (Var)	May 13th., 1908	do.	do.	30,8
				96,2

Number of Hectares Worked	Loans Granted					Period Years	Rate %	Intermediary Regional Banks
	1908	1909	1910	1911	1912			
200	—	—	—	—	18,500	20	1.50	Var
216	—	—	—	—	17,000	20	2	Gard
500	—	12,000	—	—	—	20	1.50	Var
400	—	—	—	—	10,000	15	2	Alpes-Maritimes
270	—	30,000	—	—	—	20	2	Alpes-Maritimes
100	—	4,000	—	—	—	15	2	Aixoise
400	—	16,000	—	—	—	15	2	Alpes-Maritimes
150	—	—	—	20,000	—	15	2	Aixoise
900	—	—	—	35,000	—	20	2	Gard
100	—	—	6,250	—	—	15	1.50	Var
70	—	—	—	—	3,000			
3,306	—	62,000	6,250	55,000	48,500			
			171,750					

given them the means for equipping their oil mills and their winecellars at the same time, to the great advantage of the small farmers, who could not dream of entering into immediate relations with consumers for the purchase of their different crops.

Rowing Societies.

Number of Hectares Worked	Loans Granted					Period Years	Rate %	Intermediary Regional Banks
	1908	1909	1910	1911	1912			
300	45,000	—	—	—	24,000	20	1.50	Var
390	21,250	—	—	—	—	20	1.50	Var
200	—	10,000	—	—	—	15	1.50	Var
75	—	7,000	—	—	—			
178	—	20,000	—	41,000	—	20	1.50	Var
1,143	66,250	37,000	—	41,000	24,000			
		168,250						

VIII and IX. — VARIOUS DISTILLERIES: STARCH FACTORIES.

We have already seen how in the same region of the South the State advances have assisted the installation of distilleries from wine. An equivalent form of this rural industry is found in the department of the North, where, with the assistance granted by the 1906 law, distilleries of various products have been formed or developed; co-operative distilleries from beetroot have

TABLE VI

Name of the Co-operative Society	Date of Establishment	Duration of Agreement	Form	Paid up Capital
Beetroot Distillery, of Anneville-sur-Seine (Seine Inférieure)	Nov. 21th., 1909	15 years	Civil	89,000
Cherry Distillery, " La Marotte " at Mouthiers (Doubs)	April 2nd., 1911	Unlimited	do.	2,900
Beetroot Distillery of Raffetot (Seine-Inférieure)	Jan. 27th., 1908	15 years	do.	66,500
— of Senneville (Eure)	Feb. 14th., 1912	15 »	Commercial	75,000
— of la Vallée de la Suize (Marne)	Feb. 16th., 1911	15 »	Civil	149,200
— of Vandoué (Seine-et-Marne) . .	Feb. 26th., 1899	50 »	do.	167,500
— of Yvetot (Seine-Inférieure) . .	Jan. 24th., 1912	15 »	do.	75,000
				625,100

TABLE

Co-operative Society of Ban de Laveline (Vosges)	March 26th., 1905	30 years	Commercial	54,000
Co-operative Society of Goro (Vosges)	Feb. 13th., 1908	30 »	do.	20,000
				74,000

been founded, with all the necessary plant, and the result has been a rise in the price of beet in the regions concerned, by which even those producers have profited who have not adhered to the co-operative societies. The alcohol thus obtained is sold by the societies either as rectified spirits for consumption or as methylated spirits for industrial purposes. In addition, there is a cherry distillery, for manufacture and sale of kirschwasser, founded under the auspices of the law. There are also starch factories.

Various Distilleries.

Number of Hectares Worked	Loans Granted					Period	Rate	Intermediary Regional Banks
	1908	1909	1910	1911	1912			
110	—	—	140,000	—	35,000	15	2	Hte. Normandie.
100	—	—	—	5,000	—	15	1.50	Doubs.
120	100,000	—	30,000	—	—	13	2	Hte. Normandie.
110	—	—	—	—	150,000	15	2	Oise.
528	—	—	—	210,000	—	15	2	Marne, Aisne et Ardennes.
150	95,025	—	—	—	—	24	2	Seine-et-Oise.
110	—	—	—	—	139,700	15	2	Hte. Normandie.
1,228	195,025	—	170,000	215,000	324,700			
	904,725							

factories.

60	—	12,000	—	—	—	20	2	Est-Epinal.
30	40,000	—	—	—	—	25	2	Est-Epinal.
90	40,000	12,000	—	—	—			
	52,000							

X. — SOCIETIES FOR VARIOUS PURPOSES.

But this variety of application the law lends itself to appears more fully when we consider the class of co-operative societies of various character in which are grouped all the societies formed by means of the State advances in every part of the country, with the most dissimilar objects: production and transformation of vegetables (tomatoes, cabbages etc.) distillation of flowers, foundation of flour mills and bakeries, which have solved the problem of increasing the price of wheat, while lowering that of bread and improv-

TABLE X. —

Name of the Co-operative Society	Date of Establishment	Duration of Agreement	Form	Paid up Capital
Co-operative Food Supply Society of Bram (Aude)	March 29th., 1907	25 years	Commercial	31,450
Co-operative Thoroughbred Horse Improvers' Society of Chantilly (Oise)	Oct. 12th., 1910	25 years	Civil	98,000
— Agricultural Mills of Condom (Gers)	Feb. 9th., 1908	Unlimited	Commercial	33,545
— Agricultural Flax Society of the Department of Vosges at Epinal (Vosges)	Nov. 23rd., 1907	30 years	do.	7,500
— Mutual Caseine Society of Gateau by St. Loup (Deux-Sèvres) . . .	April 1st., 1911	99 years	Civil	40,000
Flower Producers' Society of Grasse (Alpes-Maritimes)	Feb. 16th., 1908	30 years	Commercial	49,200
Transport Society of May-en-Multien, le Plessis-Placy, Lizy-Sur-Ourcq (Seine-et-Marne)	April 24th., 1908	15 years	Civil	108,600
Sugar Refinery of Morigny (Seine-et-Oise)	May 21st., 1904	75 years	Commercial	50,000
Soc. for the Improvement of the Parthenaise Stock at Niort (Deux-Sèvres)	March 7th., 1912	18 years	Civil	10,000
Electric Soc. of Pronais Rosay (Bure)	Jan. 16th., 1912	99 years	Commercial	40,975
Mills and Bakery of Rameupt (Aube)	July 19th., 1911	30 years	Civil	50,000
Co-operative Sauerkraut Society of the Lyonnaise Region at Rillieux (Ain)	Nov. 8th., 1908	—	do.	68,970
"La Bretonne" Society for the Sale of Vegetables and Early Produce at St Pol de Léon (Finistère) . . .	April 10th., 1910	50 years	Commercial	37,000
"La Rouche Saramonaise" Mills and Bakery at Saramon (Gers) . . .	April 9th., 1911	99 years	do.	14,350
				639,475

ing its quality ; other societies have been founded for the purpose of extracting caseine from milk, thus founding a new industry by which the whole region profits ; others have succeeded in selling their vegetables and early produce on distant French markets and in foreign countries, such as England and Germany. Going even further, the peasant co-operators have invoked the assistance of the law in order to obtain the capital required to construct a railway line for the transport of their crops, or to purchase the plant indispensable for the production of electric power and light required for their business.

Various Purposes.

Number of Hectares Worked	Loans Granted					Period	Rate	Intermediary Regional Banks
	1908	1909	1910	1911	1912			
36	55,000	—	—	—	—	24	2	Toulouse.
—	—	—	—	100,000	—	15	2	Oise.
2,400	50,000	—	—	10,000	—	13	2	Gers.
75	15,000	—	—	—	—	20	2	Est-Epinal.
—	—	—	—	80,000	—	10	2	Deux-Sèvres.
100	—	40,000	—	—	—	15	2	Alpes-Maritimes.
750	—	150,000	—	30,000	—	13	2	La Brie.
700	100,000	—	—	—	—	25	2	Seine-et-Oise.
—	—	—	—	—	20,000	15	2	Deux-Sèvres.
1,100	—	—	—	—	64,850	15	2	Beauce et Perche.
1,500	—	—	—	—	100,000	20	2	Aube.
50	—	137,940	—	—	—	17	2	Ain.
480	—	—	—	—	50,000	15	2	Finistère.
2,970	—	—	—	—	28,600	15	2	Gers.
—	220,000	327,940	—	220,000	263,450			
	1,031,390							

CONCLUSION.

This simple enumeration shows eloquently, and more clearly than any words, the value of the 1906 law, both in stimulating activity and realising its objects. It has supplied the farmers with the most precious equipment for their work, and, by facilitating every kind of enterprise, it has aroused all their energies. In a few years its influence has been so fruitful, its rôle so beneficent, that it has encouraged, legitimated and surpassed every hope at first excited. It has destroyed the belief that the peasant would never agree to enlarge the narrow horizon by which his life and thought were bounded; it has proved that, on the contrary, it was necessary fearlessly to appeal to his spirit of enterprise and that it was enough, in order to reveal the farmers to themselves, to obtain for them the resources whence they might have confidence in themselves and confidence in each other. After the example of the philosopher who proved movement by walking, the 1906 law has enabled the farmers to prove to themselves and to others all that they could do by means of co-operation: the experience has been conclusive and the results henceforth follow logically and continuously.

Part II: Insurance

FRANCE.

HAIL INSURANCE.

SOURCES:

- WERB (Anatole): Introduction à l'étude de la prévoyance. (*Introduction to the Study of Foresight*). Paris, Marcel Rivière, 1911.
- NORMAND (L.): L'assurance contre la grêle (*Hail Insurance*), "Annales de la Mutualité et de la Coopération agricole," March, 1913.
- LA CHARTIER ET DARDONVILLE: Paris-Assureur. "Annuaire de l'Assurance et de la Prévoyance spéciale".
- ASSURANCES CONTRE LA GRÈLE. Le fonctionnement des Compagnies et des Mutuelles en 1912. (*Hail Insurance Businesses. The Work of the Companies and Mutual Societies in 1912*). « L'Argus » April 6th., 1913.

§ I. EXTENT OF THE RISK AND THE MODES OF INSURANCE.

From the statistics of the last twenty years it may be calculated that the storms by which crops are damaged in France number about 12,000 a year.

According to declarations sent to the Government, the average loss, in an average year, amounts to 83,000,000 frs, but if the casualties which are not declared be taken into account, the amount of damage annually caused by hail must be calculated at nearly 100,000,000 francs — exclusive of course of specially disastrous years.

The damage caused by hail varies exceedingly in different districts. Nothing is more uncertain than a hailstorm, nothing is more unequal in its ravages. The climate, the position of the land, its configuration, have an immense influence on it: in certain departments the average losses are 8,000,000 frs. annually and in others certain vineyards are destroyed once every three years.

In 1,000 observations of storms, there has been observed an average of 87 cases of hail, but this relative frequency of hail varies very much

according to the season : it is only 6 % during the five warm months and 14 % during the other seven.

It will easily be imagined that there are many difficulties connected with this study, due to the insufficiency of the knowledge at present possessed of the geographical distribution of hailstorms, and how numerous in consequence are those overcome by the companies in calculating the risks with sufficient precision and in laying down their principal requirements for insurance.

In practice, besides the clauses relating to the reciprocal position of the contracting parties, to the objects and the duration of the contract, the settlement of claims and all the formalities which are shown to be necessary, hail insurance policies always contain a certain number of particulars applicable to each individual insured. These notes in manuscript specify the area of the land to be insured, the probable value of the crops, the amount assured and the premium agreed upon. Similar valuations referring to similar risks are added up and included under one head.

Every year any change in the sowing or in the expected return of the crop must be notified in a declaration of rotation of crops and sent to the insurance office within a certain period. The greater number of companies insure only against damage caused by hail to the exclusion of any further damage to the crops caused by storms, cyclones or any other such atmospheric disturbance. The principle of the insurance companies is to take account of diminutions of quantity only; not of loss in quality, and thus to avoid abuses which otherwise would certainly arise.

All integral and utilisable parts of the crop are insured as long as they are attached to branches or roots, and until they are separated from the earth.

The policies are generally for five years unless by special agreement. The valuation of damages and the settlement of claims are made by private agreement or by an expert. No claim can be made if the damage does not exceed one fifth of the produce insured.

§ 2. THE LARGE MUTUAL SOCIETIES.

According to M. Anatole Weber, who has treated the subject in a learned manner, the first really considerable attempt at insurance against hail was made about the beginning of the XIXth century. On the 24th of November, year X, M. Barreau founded at Toulouse "The Society of Reciprocal Insurance", which guaranteed a certain portion of risk by means of a premium of 3 % on the estimated value of crops. If the year proved good the surplus of premiums after payment of claims was divided among all the members. Some good years were followed by storms in the South and the Society, unable to meet its obligations, was dissolved after having lasted only eight years.

In 1823, a new society, la *Cérès*, was founded in Paris with the same object. Soon after followed *l'Eclair*, *l'Iris*, *l'Égide* etc. Several of these are still working, some in their original form of mutual societies, some transformed into companies with fixed premiums. The first founded were mutual societies, but when, in the course of a few years, possibilities of profits appeared, capitalists seized on the chance and formed companies limited by shares. These two forms are still in use.

The principal mutual insurance associations in France against hail are:

1st. "La *Cérès*", founded in 1823, insuring all crops except tobacco, including also vineyards and nurseries. Its business extends over the centre, the west, the north-west and north-east of France. It assures an amount of 48,654,000 francs.

2nd. "La Société Mutuelle de Toulouse", dating from 1826. Its growth was slow, because hampered at first by too severe laws and by difficulties encountered in the division of risks. But in later years it has greatly extended its operations, all over France, though principally in the south east, the north and l'Isle de France. Out of 27 branch offices three only have been compelled to make a deduction from the amount due for claims but never more than 30 %. The amount assured had reached 127,162,760 francs and that of the reserve fund, 3,376,410 francs, at the close of 1912. This society transacts reinsurance for the benefit of the local societies of which we shall speak hereafter.

3rd. "La Société d'Assurances Mutualles de Seine-et-Marne", dating from 1829. Its sphere of action embraces Seine-et-Marne, Seine-et-Oise, Seine, Oise, Aisne, Marne, Aube, Yonne and Loiret. In 1912 it assured 46,13,105 francs. Since 1830 the Society has paid 21,440,040 fr. in claims, while the amount assured was 3,058,700,170 fr. and an average premium of 7.01 fr. per 1,000 fr. of value insured, has sufficed to pay these claims. The expenses of management do not exceed one franc per thousand.

4th. "l'Etoile", dating from 1834. It has issued 8,634 policies representing 76,840,000 fr. of capital and has a reserve fund of 2,000,000.

5th. "La Régionale du Nord," insuring against hail every description of crop in the northern departments of France. The amount assured is 9,656,190 fr. divided among 1,383 policies.

6th. "La Ruche du Pas-de-Calais, du Nord et de la Somme", founded in 1857 under conditions of doubtful legality, but entirely reconstituted in 1896 in conformity with the law of 1867. It now assures the amount of 29,300,292 fr. represented by 5,229 policies.

7th. In the following table which we reproduce from the *Argus* of April 6th, 1913, will be seen the situations of other large mutual societies, viz. "l'Aisne", la Beauceronne-Vexinoise", "la Mutuelle de Seine-et-Oise", "la Garantie Agricole", "la Grêle", la Mutuelle Générale, "La Ferme" and "la Rurale". Altogether these societies assure 583,075,081 fr., divided among 108,222 policies.

Formation of the Large Mutual Societies and Companies Limited by Shares, Transacting Hail Insurance Business in 1924.

§ 3. LIMITED LIABILITY COMPANIES.

In the above table the situations of the limited liability companies for hail-insurance in France are included. As will be seen there are only two, and this small number seems to be due to the fact that by their nature as well as according to their policies, they must pay the persons insured the full amount of their losses even if out of their share capital or other funds. In addition to their legal status also by this fundamental obligation they differ from the mutual societies.

As M. Anatole Weber has so clearly explained, the companies with fixed premiums have often made serious miscalculations in this branch of insurance, because at first they did not know how to proportion their premiums to the general frequency of the scourge in each district. In order to do this they had first to learn by repeated observation the points where hail falls and by a valuation of the land, so to speak, in accordance with the cadastre, to know the extent of the risk, and they take account of the purely statistical difficulties to be met with in many districts.

Consistency, ability, and prudence are of all things indispensable in this kind of business, and the guarantees offered to the contracting parties are the surer as the transactions are made with as many chances as possible in their favour. In order to ensure success, the company ought besides to have large reserves so that cultivators may be sure of compensation for every loss.

§ 4. TARIFS AND THE DIFFICULTY OF FIXING THEM.

Any one who examines the results obtained both by the large mutual societies and by the companies with fixed premiums will be struck by the fluctuations to which both groups are subject.

In 1894, a very favourable year, the net profits rose for both classes to 3,000,000 francs, and the reserve funds were not less than 7,000,000. But in 1897, a bad year, the losses were 1,630,000 francs and the total amount of the reserve funds was about 3,500,000 francs. There was, therefore, in the interval of three years, a difference of nearly 8,000,000.

This comparison of figures is alone sufficient to show the difficulties encountered by hail insurance societies, in establishing scientific combinations and reasonable tarifs. It is certain that these questions have not yet been definitely decided, and they will remain a subject for technical consideration until a scientific solution has been arrived at, as only by the

investigation of the laws of storms and cyclones can a means of efficacious protection be found against them.

In fact there are no hail insurance tariffs, but some cantons or communes have a special system of payments according to their situation, to the exposure of the land and to the frequency of hail storms.

The rates are fixed either in accordance with the nature of the insured crops and the frequency of losses in a given period or by contract according to the amount assured.

La Ruche du Pas-de-Calais et de la Somme adopts the following classification.

1st. class ; Meadows, cereals and roots	0.60 %	} of insured crops,
2nd. » Leguminous and seed plants	1.50 %	
3rd. » Oleaginous and industrial plants	3.50 %	
4th. » Tobacco	5.00 %	

of which 8 tenths are added to the share capital and the rest to an eventual reserve fund.

The system of the *Avenir* resembles the above, but is based on a very perceptibly graduated scale in proportion to the frequency of casualties in the place in question.

Where hail has not fallen for ten years the premium varies with the crop, from 0.60 % to 6 %. Where hail has fallen once in ten years with more than 20 % of loss, the premium varies from 0.90 (fodder crops) to 9 francs (tobacco, vines etc.) ; the communes where hail has fallen at least twice in ten years with more than 20 % of loss pay 1.50 for the first class insured (meadows) and 15 francs for the fourth (vines, tobacco etc.).

The *Caisse départementale de la Haute-Marne*, which is one of the local mutual societies to be spoken of later, divides the communes into three categories, according to whether they have suffered :

6, 7, 8, 9 or 10 disasters in 50 years	(1st. category)
3, 4, 5 » » »	(2nd. »)
0, 1 or 2 » » »	(3rd. »)

The maximum and minimum premium vary as follows (art 26) :

For agricultural crops :

from 1 to 15 francs in the 1st. category
» 1 » 10 » » » 2nd. »
» 1 » 6 » » » 3rd. »

For vines and osier beds (accounts kept separate from the above) :

from 1 to 25 francs in the 1st. category
» 1 » 20 » » » 2nd. »
» 1 » 15 » » » 3rd. »

These premiums correspond with the largest claim granted for 1,000 francs of loss. Supposing for example that the bank could grant the maximum say 90 %, 10 % for the reserve fund being deducted) those who pay the highest premiums will receive 90 % of their losses. Those who pay a lower premium are only entitled to compensation in proportion to the amount of that premium ; they themselves must bear the remainder of the risk.

We reproduce below from the *Paris Assurer* by MM. le Chartier and Dardonville, the tariff of the different classes in the "Abeille" Cots", and "Confiance".

Company	1st. class	2nd. class	3rd. class	4th. class	5th. class
Abeille	1/2 to 4 %	—	—	—	1.50 to 15 %
Cots	—	—	—	—	—
Confiance	$\begin{cases} a - 0.30 \text{ to } 6 \% \\ b - 0.40 \text{ to } 7 \% \\ c - 1 \text{ to } 8 \% \end{cases}$	$\begin{cases} 1 \text{ to } 25 \% \\ — \\ — \end{cases}$	$\begin{cases} 2 \text{ to } 35 \% \\ — \\ — \end{cases}$	$\begin{cases} — \\ — \\ — \end{cases}$	$\begin{cases} — \\ — \\ — \end{cases}$

The following tables show the distribution of the various crops in these cases according to the arrangement made by these companies :

	Abelie					Cétes			Confiance		
	I	II	III	IV	V	I	II	III	I	II	III
Oats	II					II			Ib		
Beet, Turnip	Reserved for decision of the Management					III			Ic		
—, Sugar	Reserved for decision of the Management					—			—		
—, not for seed	—					I			Ia		
— for fodder	I					—			Ia		
Wheat	I					I			—		
Canoline				III			III		Ic		
Hemp				III			III		Ic		
Cardoons					IV			—	—		
Colza				III			—		Ic		
—, winter and summer				—			III		—		
Spelt				II			II		Ia		
Winter-barley				—			II		—		
Horse-beans				—			III		—		
Beans				—			III		Ic		
— for seed				III			—		—		
Fruit				—			—		Ic		
Madder				I			—		—		
Chickpeas				—			III		—		
— for seed				III			—		Ic		
Kidney-beans				—			III		Ic		
— for seed				III			—		—		
Hops					IV		—		—	II	
Leguminous plants				III			III		—		
Lentils				—			—		Ic		
— for seed				III			III		Ic		
Flax				III			III		Ic		
Lucern				—			—		—		
—, not for seed				I			—		Ia		
Maize				—			I		Ia		
Meslin				II			II		Ib		
Millet				I			—		Ia		
Mustard					III			III		Ic	
Mulberry leaves				I			—		—		

	Abelle					Céts			Confiance		
	I	II	III	IV	V	I	II	III	I	II	III
Rape			III				III		Ic		
Poppies			III				III		Ic		
Barley			II				II		Ib		
Oats			—				—		II		
Fodder for seed			—				—		—		
Peas			—				III		—		
— for seed			—				III		Ic		
Potatoes			—				—		—		
Artificial meadows for fodder			—				I		Ia		
Natural meadows			—				I		—		
—, not for seed			I				—		Ia		
— for fodder			—				I		—		
Plums			—				—		II		
Rice			II				II		—		
Saffron				IV			—		—		
Sainfoin			—				—		Ia		
—, not for seed			I				—		—		
Buckwheat			III				III		Ic		
Rye			II				II		Ib		
Sorghum			I				I		Ia		
Tobacco				V			—		III		
Clover			—				—		Ia		
—, not for seed			I				—		—		
Vetches			—				III		—		
— for seed			III				—		Ic		
Vines				IV			IV		II		

It may be added that in general when the straw of cereals is excluded from insurance the premium for grain is increased by 20 %. On the other hand the premium for colza and rape is generally diminished by one quarter whenever it is stipulated in the policy that the insurance shall cease as soon as the plants are detached from the soil.

§ 5. LOCAL MUTUAL SOCIETIES.

Insurance against hail, like insurance against other agricultural risks has caused the formation of local mutual societies of limited liability with reinsurance of risks and reinsurance of a large part of these. As we

said in our number of last November (pages 92 and 93), there were 27 of these societies with 38,000 members in 1911. Their situation seems to be stationary, which, as M. Anatole Weber explains, shows that "there is nothing more hazardous than these associations of few members all unequally liable to suffer from disasters, and consequently likely to have recourse in varying degree to the common fund, which is insufficiently provided with means to meet such considerable losses. In such a case, and even more than in the case of insurance of livestock, the dispersion of risks is a law which ought to be as closely observed as that of large numbers." Thus the absolute need of reinsurance against hail is confirmed.

§ 6. REINSURANCE.

The Council of Ministers has decided to draft a bill for insurance and reinsurance against hail and frost prepared by an Inter-Ministerial Commission.

M. Clémentel, Minister of Agriculture, in his speech of August 20th, 1912, recommended the establishment of a national hail and frost insurance and reinsurance society. "It is indispensably necessary," he said, "that the cultivator, who during the year has carefully tended his crop and lavished upon it his daily labour, be granted means sufficient to enable him to live and work until his harvest comes in. No doubt, ways and means to realise this great work will be difficult to find, but I am firm in my belief that the problem is not insoluble."

While awaiting the termination of the work of the Inter-Ministerial Commission, the Regional Mutual Agricultural Credit Bank of the Rhône presented at the last congress of the *Fédération nationale de la mutualité et de la co-operation agricoles*, through its president M. L. Normand, a plan for the organization of a national hail insurance society.

This project rejects State compulsory insurance and endeavours to solve the problem by a mixed system with a view to establishing the joint and several liability of farmers by means of compulsion, but on condition that the obligation should be to the communal group. The Municipal Councils would be authorised by law to levy an insurance tax on landed property not built upon, susceptible of damage. In communes where the Municipal Councils refuse to levy such a tax, farmers might participate in the benefits of reinsurance on condition that the total amount of premiums paid into their society be equal to half the sum which would have been expended had the municipality imposed the hail insurance tax.

The total number of communal groups would form the departmental reinsurance society, which would be compelled to affiliate itself to the National Agricultural Mutual Society.

The communes, the reserve funds of which, amount to 1/10th. of the value of the insured crop, would be authorised to lower the rate of the insurance premiums; but they would be obliged to raise this rate to a certain maximum in case of a deficit.

This plan is based on the estimate of the total annual damage occasioned by hail; the total amount of such damage is, in France, about one hundred millions of francs a year.

For fruit and vegetable crops and for vineyards, it has been calculated that there might be a uniform premium rate. This rate, 1.32 %, has been obtained by a comparison of the total produce of every crop with the amount of 100,000,000 frs. which represents the annual damage caused by hail.

This rate of 1.32 % may be considered as the maximum, because in calculating the gross revenue per hectare at 1,400 francs for orchards, at 1,000 francs for market gardens and at 914 francs for vineyards, too low figures have been taken.

The cultivation of cereals covers an area of 14,600,000 hectares, of which the total revenue amounts to 2,600,000,000 giving an average revenue of 178 francs per hectare. The damage caused by hail to cereals being much less serious than to vines and other crops, the insurance premium would be 0.30% of the yield bringing the insurance tax to 0.55 franc per hectare.

For the 14,600,000 hectares the premiums would, under these circumstances, amount to 8,070,000 francs.

In view of these figures it seems no exaggeration on the part of the framers of the bill to fix the grant to be obtained from Parliament at 25,000,000, especially as this sum must be considered as a maximum which may never be reached; in fact the share paid by the State ought to be in proportion to the amount assured and, supposing that half the territory is reinsured, the grant would amount to 12,500,000 francs, a sum which, with the relief from taxation accorded in individual cases, represents exactly the contribution now requested from Parliament.

The plan will be understood from the following table:

SWITZERLAND.

A PROPOSAL FOR COMPULSORY CANTONAL HAIL INSURANCE.

OFFICIAL SOURCES:

RAPPORT DU BUREAU FÉDÉRAL DES ASSURANCES SUR LES ENTREPRISES PRIVÉES EN MATERIE D'ASSURANCE EN SUISSE EN 1911 (*Report of the Federal Insurance Office on Private Insurance Undertakings in Switzerland in 1911*). Berne, Franck, 1913.
MAUBER (Dr. J.): Les orages à grêle en Suisse (*Hailstorms in Switzerland*). Published in the Swiss Agricultural Yearbook, 12th number. Berne, Wyss, 1912.

OTHER SOURCES:

L'AGRICOLTORE TICINENSE (*Ticino Farmer*), Organ of the Cantonal Society of Agriculture. No. 31. Year XLV. Locarno.
RAPPORTS ANNUELS 1904-1912 DE LA SOCIÉTÉ SUISSE D'ASSURANCE CONTRE LA GRÈLE À ZURICH. (*Annual Reports, 1904-1912, of the Swiss Hail Insurance Society at Zurich*).

In consequence of the violent hailstorms by which the Canton of Ticino has been visited in recent months, inflicting most serious losses on the farmers of the country, the question of hail insurance and the best means for its extension is again to the fore and various proposals have been advanced by influential persons at least to diminish in future the losses due to this cause.

We think it well to mention amongst these that of Prof. Fantuzzi of Locarno, in relation to cantonal compulsory hail insurance. The discussions to which it has given rise and their results we shall have occasion to return to. For the present, we shall only attempt a summary of the proposal, following it up with a few remarks on the frequency of hail in the Canton, which will show how serious the question is.

* * *

Having premised that the private insurance societies either ask too high premiums or do not extend their operations to the Canton, because they consider the risks presented there too serious, Prof. Fantuzzi proposes to found a cantonal hail insurance society of public character.

The insurance would extend to the whole Canton and be compulsory for all vines. However, it must be observed that in the higher valleys of the Canton the damage caused by hail is far less than in the lower;

therefore the inhabitants of Vallemaggia, Valle di Blenio and Levantina would hardly be ready to pay premiums for the exclusive benefit of the farmers of the districts of Bellinzona, Locarno, Lugano and Mendrisio, which are the parts that most frequently suffer. To meet this difficulty, Prof. Fantuzzi thinks that, as in the higher valleys, on the other hand, losses through fire are more serious, as the houses there are for the most part built of wood and nearer to each other, a compulsory fire insurance institute might later on be founded in connection with that for hail insurance.

It is not advisable to extend hail insurance to all crops, because the character of many of them is not specialised, while they occupy a small area and are cultivated very near each other, so that the valuation of losses is difficult and costly. Among the crops, grasses suffer the least from hail; they are cut two or three times a year and a storm never damages the whole crop; in addition, they are especially cultivated in the mountain districts where hail is less frequent. With regard to fruit trees, their cultivation is not yet of sufficient importance in the Canton for fruit to be included among the produce to be insured. So that for the present the cantonal society should only insure grapes, as the vine is cultivated in limited areas, easily accessible and the damage done is easy to ascertain. The value of the produce of the vine in the canton that would have to be insured against hail is estimated by Fantuzzi at about 3350,000 frs.

The revenue of the Insurance Institute would be made up by means of :

- (a) payments made by the policy holders ;
- (b) cantonal and federal subsidies ;
- (c) profits from fire insurance ;
- (d) eventual donations from public organizations and private individuals.

The insurance premiums must be fixed for the several regions in proportion to the risks and the tariffs must be prepared and published every year by the Department of Agriculture, at least a month before the declaration of the respective revenues of the policy holders.

Prof. Fantuzzi proposes the division of the canton into eight agricultural regions: the districts of Bellinzona and Locarno in which the premium would be 5 frs. per every 100 frs. of value insured, Blenio and Levantina in which it would be 2 frs., Riviera and Vallemaggia where it would be 3 francs, the district of Lugano where 6 frs. would be charged, and that of Mondrisio where the premium would be 10 frs. Judging by the amounts to be insured in the various districts, the annual income of the Institute would be 188,500 frs.; and as the probable average amount of the claims is estimated at 180,000 frs., there would remain 8,500 frs. to cover the costs of estimation or to be placed to the reserve fund.

As an encouragement, the Canton should contribute 20 % of the premiums of the individual policy holders, in which case (in accordance with

article 13 of the federal law of December 22nd., 1893 on agricultural improvements and article 76 of the regulations of July 16th., 1894 for the execution of the above law) the Confederation would contribute an amount equal to half the expenditure supported by the Canton. As is seen in the last report for 1913 of the Federal Insurance Office, the only canton that do not grant subventions for hail insurance are Uri, Glarus, Ticino and the Grisons; the other 21 cantons contribute to the development of this branch of insurance undertaking the payment of a part of the premiums and the expenditure in connection with the policies (in a proportion, varying with the canton, of from 15 to 40 %). From the same report it appears that the cantonal subventions in favour of hail insurance amounted altogether in 1911 to 464,820 fr., of which 123,241 frs. were for expenditure in connection with policies, and 341,579 frs. refunds of premiums. In the same year the subventions granted by the Federation to the 21 cantons amounted to 232,410 frs.

In Prof. Pantuzzi's proposal, the expenditure in connection with the policies and the estimation of losses would be entirely borne by the State.

The policy holders must pay the annual premiums to the communal collector and the rules in force with regard to the collection of communal taxes shall also apply to the insurance premiums. In the first five years following the foundation of the Institute, the policy holders should pay the whole premium and the cantonal and federal subsidies should be placed to the reserve fund. But in succeeding years the premiums could be reduced in proportion to the amount of the Government subsidy.

In the month of June of each year the viticulturists will receive, through their respective committees, a form to be filled in. This form the policy holder must complete by the insertion of his name and surname; his position (whether land holder, tenant farmer etc.), the situation of his vineyard, its area, the number of vines, the age of the vineyard, the kind of vines, and the harvest he anticipates. The form, duly filled in, will be forwarded to the Commune, which will appoint a special commission to verify the statements made.

After the examination of the forms, the commune will forward them to the Department of Agriculture and the statements will be again checked by a special valuation commission. This commission may visit the farm for the purpose, and definitely ascertain the truth of the statements, prepare the premium tariffs and communicate them in due course to the various communes. The losses will be compensated by the valuation commission in accordance with the value assured, less what expenditure the proprietor may have been saved in the working season between the date of the storm and the vintage.

If hail falls before the amount of produce to be insured is definitely established, the loss will be calculated in accordance with the produce of the nearest vineyards, not damaged by hail, or if this criterium cannot be applied, with the average produce of past years.

As soon as a disaster occurs, the Commune must advise the Department of Agriculture and the valuation commission must take steps to ascertain the losses. It will advise each policy holder in writing of the amount of loss it is intended to compensate. If the proprietor thinks he cannot accept the decision of the valuation commission, he may, within a week from receipt of the advice, appeal to the Agricultural Department for arbitration.

This shall be given by a Commission of three members, one of them appointed by the commune in which the vineyard damaged is situated; a second by the policy holder appealing and the third by the Department of Agriculture. There shall be no appeal against the decision of this Commission. The same course shall be pursued when the State asks for arbitration. Two thirds of the expenses of the arbitration committee shall be borne by the appellant and one third by the other party. When the loss has been definitely ascertained, the amount shall be paid within a fortnight by the Cantonal Institute.

Until the reserve fund amounts to two fifths of the total amount assured, in the case of a disaster of exceptional importance, the State may reduce the compensation in such proportion as not to place the Institute in such a condition that it will not be able in future to meet the ordinary expenses of its business.

* * *

Having thus given Prof. Fantuzzi's proposal for the institution of a compulsory cantonal hail insurance institution in outline, let us consider, the seriousness of the risks of hail in the Canton of Ticino as shown in a recent report by Dr. Maurer, General Manager of the central meteorological station of Zurich. Dr. Maurer has also published a synoptic chart showing the frequency of hail in Switzerland in the years 1883-1900, subdividing the territory of the Confederation into six regions according to the number of storms in the period. In the Canton of Ticino the number of storms varied between 6 and 8 in the districts of Locarno, Bellinzona, Lugano and Mendrisio, and from 1 to 2 in the valleys of Verzasca and Morobbia; it was from 3 to 4 in the other districts. However, from Dr. Maurer's study, we see that there were several districts where the number of hailstorms was greater, for example, it was from 4 to 11 in the south east of the Canton of Berne, and from 12 to 17 in the Canton of Basle, near Liestal and along the Ergolz between Lissach and Liestal. The accurate observations of Maurer confirm certain conclusions of other meteorologists, who have studied the subject, namely Hess in Switzerland and Rizzo and Pochettino in Italy. So, for example, it is observed that the basins of watercourses presenting an obtuse angle to an approaching storm favour the formation of hail; likewise, the theory is confirmed that forests, on the other hand, produce the contrary effect, rendering the storms less violent. However, in order that this

influence may really be exerted, the forest must be of large area or the storm must already have lost some of its intensity. Further, another condition necessary for this protective influence of forests to have effect is that the district beyond the wooded mountain or hill is not favourable to the formation of hail, and has not water courses, swamps etc.

Valleys completely surrounded by mountains are also favourable to the formation of hail; however, the frequency of hail becomes less as we approach the Alps where it is reduced to a fourth of the average of Switzerland.

In the large Alpine valleys hailstorms are very rare, or in any case only partial. This is explained, according to Dr. Maurer, partly by the fact that the storms diminish in intensity as they pass from the spur of the Alps to the Alps themselves, and partly from the influence of the altitude above the level of the sea on the hailstones; in fact in the high mountains hail falls rather in the form of sleet.

Dr. Maurer recognises that on the southern slope of the Alps, the district where hailstorms are most frequent is the Canton of Ticino. In the South of the Canton, hailstorms occur almost every year, sometimes affecting a very large area: sometimes, so to say, they divide the territory of the canton between them, so that within a certain period of time the various regions suffer from hail, as it were in turn. However, the valleys of the Agno and Cassarate to the north of Lugano seem to be the most subject to these storms.

The researches of Hess and Maurer confirm the theory of the close relation between marshy areas and frequent hailstorms. In marsh districts hail is most frequent and this is clearly seen in many parts of Switzerland; for example, between Semsales and Sales, in the valley to the North of the "Brienzer Rothorn", in the district of "Haglerei" which certainly derives its name from the frequent fall of hail; in the valley of Einsiedeln etc. To the south of the Alps this connection between the frequency of hail and the existence of marshes is found also in the Canton of Ticino, in the district between Locarno and Bellinzona.

Finally, the researches in question prove that the regions in which storms are most numerous are also those of the greatest frequency of hail.



From several reports of the Zurich "Swiss Hail Insurance Society", that is of the society in which most of the Swiss farmer are insured (1), we see that it has often been in treaty with the agricultural associations of the Canton of Ticino, for the active extension of its business to this Canton, but the distance of the Canton from

(1) See in the number of this Bulletin for August, 1913, the details as to its working, in the article on the Development of Agricultural Insurance in Switzerland.

the head quarters of the society and the seriousness of its hail risks have up to the present prevented the success of these negotiations.

But independently of Prof. Fantuzzi's proposal for a compulsory cantonal insurance society, it may be that the "Swiss Society", with such an amount of more than 982,000,000 frs. worth of agricultural produce insured by means of 1,004,766 policies, will decide to extend its operations to this Canton, the rather as it is in a position to offer the farmers favourable conditions even for the insurance of the produce of the vine; in fact, State Councillor Lutz, President of the Society, pointed out in his speech at the meeting held at Zurich in February of the current year, that, while the premiums for insurance of grapes, in the "Swiss Society" vary from a minimum of 4.5 % to a maximum of 75% with five intermediate terms, on the other hand, the premiums for the same produce the Swiss farmers had to pay to foreign societies before 1885 varied indeed from a minimum of 3.5 % but to a maximum of 10 % with 7 intermediate terms. Besides, we must consider that these foreign societies only undertook the insurance of grapes after the flowering, while the "Swiss Society" has no such rule and guarantees its members even against losses suffered before May 21st., and the activation of the new contract. Finally Lutz mentions several cantons in which the viticulturists have been granted a considerable reduction of their premiums, as a result of the extension of the activity of the "Swiss Society"; for example, the premiums for insurance of vines in the district of Höfe (Schwyz) has been reduced from 10 % to 6 %, in the commune of Herznach (Aargau) from 8 to 5 %, in the commune of Ister (Zurich) from 7 to 5 % etc. And while in 1880 the value of the vines insured was 845,040 frs. (or 9.17 % of the total amount insured in the society); on the other hand, in 1904, it was 6,952,170 frs. and the proportion to the total amount assured had increased to 14.87 %. The amount assured in the year 1912 was 1,772,830 frs.

We have given these figures only to show that also the private insurance societies working in Switzerland have endeavoured to facilitate the development of the insurance of vineyards against hail with the assistance of the cantonal and federal authorities. The Cantonal compulsory hail insurance institute proposed by Prof. Fantuzzi would be the first example in Switzerland of a public institution for this branch of insurance.

Part III: Credit

ITALY.

THE WORK OF THE SPECIAL AGRICULTURAL CREDIT INSTITUTES IN 1912.

SOURCES:

ANCO DI NAPOLI: CASSA DI RISPARMIO: CREDITO AGRARIO; RELAZIONE SULL'ESERCIZIO 1912.
(*Bank of Naples: Savings Bank, Agricultural Credit; Report on the Working Year 1912*).
Naples, Raimondi, 1913.

ANCO DI SICILIA: RENDICONTO DEL CONSIGLIO DI AMMINISTRAZIONE SUL SERVIZIO DEL CREDITO
AGGRAZIO E BILANCI CONSUNTIVI, ESERCIZIO 1912. (*Bank of Sicily: Report of the
Board of Management on the Agricultural Credit Service and Balance Sheet, for the Working
Year 1912*).

parts of the other Special Agricultural Credit Institutes in Italy for the Year 1912.

§ I. THE SAVINGS BANK OF THE BANK OF NAPLES AND THE AGRICULTURAL CREDIT DEPARTMENT OF THE BANK OF SICILY.

In 1912 the law N°. 70 (1) of February 2nd., 1911, entrusting the Savings
bank of the Bank of Naples and the Agricultural Credit Department of
the Bank of Sicily with the management of the funds of the Provincial
Agricultural Credit Banks in eleven provinces of Southern Italy (2) and
thus respectively, came into full operation.

(1) See in this connection the article in this *Bulletin*, April 1911, pp. 223 et seqq.

(2) That is: Aquila, Avellino, Bari, Benevento, Campobasso, Caserta, Chieti, Foggia,
Lecce, Salerno and Teramo.

This law introduces no change in the character of the operations and the manner of conducting them. The total business is rapidly increasing, especially in the case of Sicily, as is seen from the following figures:

Years	Bank of Naples	Bank of Sicily
—	frs.	frs.
1908	4,823,440	2,192,298
1909	5,390,203	4,061,269
1910	7,830,401	7,119,720
1911	9,654,213	9,137,972
1912	9,353,833	12,039,391

It is clear that this large amount of credit granted at low interest has a considerable influence on the transformation taking place in the agricultural economy of the South. The proportion of this credit granted to tenant farmers as compared with that obtained by the landholders is specially worthy of consideration. The object for which an important part of the loans is made (purchase of machinery, manure, anticryptogamic substances etc.) furnishes a clear proof of technical agricultural progress.

In the case of the *Bank of Naples*, the number of the intermediary institutes is continually increasing : and indeed, from 1,750 in 1911 they increased to 1,855 in 1912 ; however, the number of institutes considered *good* which, that is, can be relied on for credit has only increased from 868 to 938 ; among these latter 134 (124 of which are people's banks) have been accredited to the Bank also for the purpose of ordinary discount.

The *good* institutes are classified as follows : 275 Sardinian *Monti frumentari*, 234 agricultural and rural banks, 158 people's banks, 109 agricultural loan banks, 107 agricultural consortiums, 22 *monti frumentari*, 16 savings banks, 9 mutual aid societies, 6 autonomous provincial agricultural credit banks and 2 agricultural credit societies.

But only a certain number of the *good* institutes register in the *castello agricolo* (register of credits opened) : at the end of 1912, 579 were registered (*ex officio*) for the considerable amount of frs. 18,639,100 (frs. 17,296,100 at the end of 1911) : agricultural consortiums for 5,813,000 frs., people's banks for 5,518,000 frs., agricultural and rural banks for 4,362,000 frs. etc.

The operations concluded by the Bank of Naples in 1912 — not including renewals — amounted to 9,353,833 frs., for 3,626,018 frs. conducted with its own funds and for 5,727,851 frs. with those of the provincial banks. I: rediscounted bills for 7,158,974 frs., made direct loans for 89,991 frs. and discounted bills directly for 2,104,869 frs. *

The total amount of the operations completed during eleven months of work exceeded 47,000,000 frs. (30,000 granted through the agricultural consortiums, 8,750,000 through agricultural and rural banks and 6,500,000 through people's banks). The bills and acceptances at the end of 1912 amounted to 6,675,959 frs.

In spite of the altered situation of the market, the interest remained very low: 3½ % on operations (rediscounting and direct discounting) with the intermediary institutions and 4 % for small loans granted directly to farmers.

According to the information collected by the Savings Bank of the Bank of Naples, the intermediary institutes in their turn asked rates varying from ½ to 6 %, most frequently 5, 5½ and 6 %.

The credit granted to the farmers, generally by means of rediscounting bills and direct loans, was distributed as follows, according to the purpose of the loans:

1st Loans secured on legal preference mortgage:

For harvesting	loans	No.	548	frs.	278,085.72
For cultivation	"	"	4,351	"	1,631,640.86
For seeds	"	"	2,347	"	1,150,110.63
For manure	"	"	2,554	"	410,362.24
For anticryptogamic substances	"	"	2,811	"	313,908.17
For food for metayers	"	"	—	"	—
For various purposes	"	"	1,750	"	812,767.93
			14,361	"	4,596,875.55

2nd. Loans not secured on preference mortgage:

For large livestock	loans	No.	2,713	frs.	1,832,590.79
For small livestock	"	"	470	"	142,092.65
For machinery	"	"	367	"	119,393.24
For agricultural implements	"	"	295	"	41,245.56
For dead stock	"	"	50	"	21,177.35
For various purposes	"	"	41	"	21,102.86
			3,936	frs.	2,177,602.45

3rd. Loans secured on conventional preference mortgage.

For large livestock	loans	No.	2	frs.	4,000.00
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4th. Loans secured on deposit of agricultural produce as pledge.

On cereals	loans	No.	53	frs.	385,815.55
On wine	"	"	12	"	77,540.00
On oil	"	"	1	"	6,000.00
On various produce	"	"	1	"	1,131.00
	N.	67	frs.	470,486.55	

The loans on legal preference mortgage represent 63.42 % of the total credits granted to farmers: those not so secured, 30.04 %; those secured on conventional preference mortgage, 0.05 % and those secured on deposit of agricultural produce, 6.49 %.

Of these loans, 11,736 for 4,327,975.68 frs. (59.7 %) were granted to landholders working their farms, 168 for 24,957.84 frs. (0.35 %) to tenants on long lease; 320 for 142,131.10 frs. to metayers or partial metayers (1.96 %) and 6,142 for 2,753,899.93 frs. to tenant farmers (37.99 %).

The bills to be rediscounted were principally presented by agricultural consortiums (3,456,991.02 frs.), agricultural and rural banks (2,136,745.03 frs.) and people's banks (874,987.55 frs.).

The bills directly discounted were 233 (1,623,186.64 frs.) for purposes of collective purchase, 24 (437,721.10 frs.) for purposes of collective sale and 13 (43,966.15 frs.) to supply the want of funds in the intermediate institutions: these bills were almost all presented by agricultural consortiums.

The various provinces shared as follows in the total credit granted in 1912 out of the funds of the Savings Bank of the Bank of Naples and the Provincial Banks.

Provinces	Amounts
Foggia	frs. 2,551,817.25
Aquila	» 1,373,083.51
Sassari	» 819,985.30
Caserta	» 726,103.91
Bari	» 665,544.75
Lecce	» 548,388.23
Teramo	» 534,486.44
Catanzaro	» 376,862.08
Reggio	» 344,381.00
Cagliari	» 285,289.35
Campobasso	» 234,219.13
Potenza	» 198,166.40
Naples	» 174,888.38
Benevento	» 149,270.71
Chieti	» 148,799.01
Cosenza	» 112,003.30
Salerno	» 73,143.64
Avellino	» 37,481.05
Total . . . frs.	9,353,833.44

The intermediary institutes receiving credit from the Bank of Sicily increased in 1912 from 239 to 275, and by far the most (214) of them

were societies of collective title ; they may be divided into agricultural co-operative societies for production and labour (103), 41 of which carried on collective farming on an area of 41,876 hectares, agricultural credit societies (83), agricultural consortiums (17), rural banks (42), wine societies (4), *moniti frumentari* (10), agricultural banks (5), people's banks (3), agricultural associations (3).

But the *active* intermediaries, that is those in business relations with the Bank, were in 1912, 211.

The work of the agricultural credit department in 1912 increased considerably on what it was in former years.

Indeed 38,174 operations were concluded for 12,039,390.81 frs. ; 69 with private individuals for 13,755 frs. and 38,155 with intermediary organizations for 12,025,635.81 frs. (bills rediscounted for 9,990,308.72 frs. and directly discounted for 2,035,327.09 frs. The increase on the previous year's work was in operations conducted with intermediaries.

The operations, direct and indirect, were distributed as follows, according to the object of the credit.

Object of Loan	Number	Amount
Harvesting	981	206,198.30
Cultivation	9,346	2,354,493.68
Seeds	3,628	834,512.93
Manure	3,305	732,046.47
Anticryptogamic substances	43	18,933.50
Livestock	2,225	942,716.95
Machinery	147	77,381.83
Agricultural implements . .	10	2,185.00
Dead stock	151	56,183.75
Various purposes	18,051	4,779,411.76
Distribution to members . .	48	688,457.10
Collective purchase	158	911,547.26
Payment of taxes	46	369,801.68
Advances on produce . . .	26	36,521.05
Farms managed directly by co-operative societies . . .	9	29,000.00
No. 38,174		12,039,390.81

There was a considerable increase in comparison with the previous year, especially in operations connected with cultivation, manure and dead stock.

The operations may be distributed as follows with regard to the crops for which the loans were borrowed.

Classification of the

Head Quarters	Grain		Wine	
	Number of Bills	Amount	Number of Bills	Am
Palermo	3,515	872,606.24	2,173	6x
Messina	211	60,266.90	278	7
Catania	1,228	465,752.48	277	14
Girgenti	3,782	1,024,587.57	639	21
Trapani	4,851	1,017,254.25	1,003	38
Syracuse	1,383	488,891.50	1,647	50
Caltanissetta	5,548	1,189,092.90	535	13
Caltagirone	4,496	1,040,098.19	1,302	30
Total	25,004	6,158,550.03	7,944	2,381

(1) Besides this, 287 Bills for various purposes were directly discounted for organisations for

*Finally, the same operations may be divided as follows in respect to t**Classification of the*

Head Quarters	Landholders		Tenants on Log	
	Number of Bills	Amount	Number of Bills	Am
Palermo	3,800	1,109,870.00	390	137
Messina	561	164,495.98	67	8
Catania	839	390,542.05	42	10
Girgenti	2,101	549,628.32	308	105
Trapani	1,913	509,633.09	35	9
Syracuse	841	376,921.88	1,064	302
Caltanissetta	1,457	381,630.83	124	18
Caltagirone	2,862	652,138.56	18	
Total	14,374	4,134,861.61	2,048	593

(1) Besides this, 287 bills for various purposes were directly discounted for organisations for

THE WORK OF THE SPECIAL AGRICULTURAL CREDIT INSTITUTES

to the Different Crops.

Crop	Olives		Various Crops		Total	
	Number of Bills	Amount	Number of Bills	Amount	Number of Bills	Amount
394,111.15	407	106,314.30	234	675.03	7,635	2,113,514.97
44,717.31	89	21,416.25	29	1,650.00	808	211,300.21
52,485.10	24	6,384.85	57	32,895.05	1,700	703,026.84
57,370.65	33	14,085.00	502	184,351.55	5,184	1,498,675.52
22,868.25	61	16,246.78	243	76,495.68	6,374	1,436,113.31
96,587.10	84	13,420.00	209	54,384.80	3,565	1,156,109.81
53,129.10	75	16,976.00	265	61,744.32	6,601	1,453,073.84
51,085.13	26	13,420.20	59	15,699.00	6,020	—
773,383.79	799	206,593.38	1,588	485,295.43	37,887	(1) 10,004,063.72

129 fm.

Position of the borrowers.

to the Position of the Borrower.

Masters	Tenant Farmers		Total	
	Number of Bills	Amount	Number of Bills	Amount
56,385.03	2,801	810,245.02	7,201	2,114,260.09
8,051.51	132	40,917.61	808	221,955.21
136,113.64	323	137,896.68	1,801	675,373.42
152,621.54	2,092	717,226.66	5,323	1,525,368.12
20,916.97	4,223	877,067.18	6,264	1,417,146.18
83,097.17	1,429	389,954.70	3,569	1,152,466.01
145,657.62	4,458	924,898.73	6,801	1,470,195.47
56,762.74	2,802	717,401.92	6,120	1,427,299.22
659,606.22	18,260	4,615,108.50	37,787	(1) 10,004,063.72

Let us finally observe that the average amount of the loans in t year 1912 was about 250 frs.: the interest charged by the Agricultural Credit Department was 4 %, and that asked by the intermediary institutions generally 6 %.

§ 2. OTHER SPECIAL AGRICULTURAL CREDIT INSTITUTES.

The figures in the following table show the business done by other agricultural credit institutes working in the kingdom, in accordance with special laws. The only details lacking are those for the Cosenza branch of the Vittorio Emanuele III Institute for Calabria, which could not make an appreciable difference in the final results. In the table we repeat the data already given for the Banks of Naples and Sicily, which show that the total amount of operations conducted by the agricultural credit institutions in 1912 was over 36,000,000 frs.

Operations of the Special Agricultural Credit Institutions.

Total Amount of Operations in 1912	Loans in Course at End of 1912	Institutes	Loans to Intermediary Institutes, 1912	Direct Loans to Farmers, 1912	Total, 1912	Loans in Course at End of 1912
2,465,863	4,212,773					
1,188,350	2,132,963	Bank of Naples { with its own Funds with Funds of the Provincial Banks	3,265,610	360,408	3,626,018	5,664
9,137,072	6,364,187	Bank of Sicily	3,983,354	1,744,461	5,727,815	3,094
8,065,648	2,774,990	Agricultural Credit Institute for Latium	12,025,636	13,755	12,439,391	8,154
322,283	337,948	Vittorio Emanuele III Institute, Catanzaro Branch	—	193,318	205,318	375
458,916	514,043	Vittorio Emanuele III Institute, Cosenza Branch	12,500	—	—	—
309,030	527,200	Vittorio Emanuele III Institute, Reggio Calabria Branch	17,500	187,010	204,510	42
676,608	595,083	Cassa adempivile, Cagliari	186,937	4,723,851	4,939,768	1,115
1,035,792	1,581,460	— Sassari	?	?	1,607,059	(1)772
1,061,619	988,583	Provincial Bank for Basilicata	603,636	287,700	891,335	1,116
90,719,002	26,169,584	Total	—	—	36,427,361	—

(1) In addition to 625,785 frs., loans on mortgage for agricultural improvements, in which account the total credits and debits amounted to 667,163 frs.

This amount of over 36,000,000 frs. represents the agricultural credit operations conducted in the kingdom in 1912 by means of capital supplied by the above Central Institutes. There remain the operations conducted by the ordinary savings banks which are also of considerable importance calculating the credit granted to farmers, the operations conducted by individual intermediary organizations with their own funds (own capital and deposits) as well as those concluded by the Rural Banks, People's Banks and various organizations in the other regions of Italy : with regard to none of which operations have we information.

PORtUGAL.

EFFECTS OF THE LAW OF MARCH 1ST, 1911 ON AGRICULTURAL CREDIT.

OFFICIAL SOURCES:

- CAIXAS DE CREDITO AGRICOLA MUTUO. Instruções e modelo de estatutos aprovados p/ portaria de 30 de Outubro de 1911. (*Mutual Agricultural Credit Societies. Instructions and Model Rules approved by Letters Patent of October 30th, 1911*). Lisbon, Imprensa Nacional, 1911.
- JUNTA DE CREDITO AGRICOLA. Relatório e Contas da gencia. (*Agricultural Credit Junct Report and Balance Sheet*). Lisbon, Imprensa Nacional, 1913.
- LEI DE 1 DE MARÇO DE 1911. (*Law of March 1st, 1911*).
- "DIARIO DO GOBIERNO". Lisbon, 1911, 1912, 1913.

OTHER SOURCES:

- BOLETIM DA ASSOCIAÇÃO CENTRAL DE AGRICULTURA PORTUGUEZA, FUZIONADO COM "PORTUGAL AGRICOLA". (*Bulletin of the Portuguese Central Agricultural Association united with the "Portugal Agricola"*). Lisbon, 1911, 1912, 1913.

§ I. THE LAW OF MARCH 1ST, 1911 AND THE ORGANISATION OF THE AGRICULTURAL CREDIT JUNTA.

In May, 1911 we published the text of the law of March 1st, of that year, on agricultural credit in Portugal. The special intention of that law was to encourage the foundation and development of Mutual Agricultural Credit Banks (co-operative limited or unlimited liability societies), agricultural professional associations and agricultural syndicates. It was desired in this way to obtain for Portuguese agriculture the credit it required.

To obtain this end the Government instituted a special commission called *Junta do Credito Agricola*. This is composed of a member of the Higher Agricultural Board; one of the Portuguese Central Agricultural Association; one of the Agricultural Science Society; one of the Portuguese

Barberians' Society; and three managers of *Mutual Agricultural Credit Banks*. The members are appointed by Government, except those presenting the banks, for the Central Mutual Agricultural Credit Bank will choose these at the moment of its foundation in accordance with article 55 of the law. The duties of this *Agricultural Credit Junta* are the following: 1st. to obtain from the Bank of Portugal the amounts needed for the agricultural credit business of the banks; 2nd. to receive applications for loans and for discounting or rediscounting their bills; 3rd. to promote the foundation of Mutual Agricultural Credit Banks; 4th. to provide the credit institutions with the capital they require always on personal and real security and making sure that the amounts borrowed are really exclusively intended for agricultural purposes; 5th. to establish the rate of interest on the loans; 6th. to grant renewals of loans; 7th. rigorously to supervise the working of the credit institutions.

Through the medium of this Commission, the Government has placed at the disposal of the Banks 7,500,000 frs., obtained from the increase of the fiduciary circulation, and it has decided that they may also make use of the funds obtained by the liquidation of the *Celleiros Communs*. The loans granted to the Banks out of the amount derived from the increased fiduciary circulation bear interest at 3%; those granted out of the funds of the ancient *Celleiros* at 1%. In their turn, the banks to which these amounts are paid will grant their members loans at an interest varying from $3\frac{1}{2}$ to 4% when they are made out of the amounts the *Junta* advances at 3%; they will only ask their debtors from $1\frac{1}{2}$ to 3% when the loans are made out of the amounts advanced to them at 1%. The profits the *Junta* realises on these operations, less the $\frac{1}{4}\%$ due to the Bank of Portugal as commission, will serve to form a special fund for the encouragement of agriculture. By means of their profits the Banks will form a special fund which will enable them to dispense with further Government assistance.

The Agricultural Credit Banks must be founded and work in conformity with the law. Thus the banks, being intended to have a local character, can only have as members farmers directly or indirectly cultivating the soil and registered as members of an agricultural syndicate or of *Agricultural Syndicates* or again of *Agricultural Professional Associations*. The Banks may be constituted with joint and several limited or unlimited liability and their objects are the following: (1) to lend to their members for purchase of seeds, plants, livestock, fodder, agricultural machinery etc.; (2) to lend to their members for payment of dues, rents and other charges on their farms, and again for the carrying out of works to render the farms more remunerative.

These Banks grant loans not only out of the funds received from the *Junta* but also out of the savings deposited with them. They are secured on pledge on the income of the farms or on mortgage. The *Agricultural Credit Junta* may lend to the Banks only up to an amount not exceeding twice that of their capital in the case of limited liability banks; and in that of the unlimited liability banks, up to an amount equal to their

capital, plus 50 % of the value of the members' rural or urban landed property, exempt from mortgage, free and allodial.

The Banks can give no dividend to their members and their profit serve to form a reserve fund to enable them in the future to dispense with further State assistance.

From the summary information we have given with regard to this law it will be understood what influence it may have on the development of Portuguese agriculture, the rather as, we might almost say, there really was no provision for agricultural credit in Portugal before the publication of this law. It seems to us therefore specially important to show the results of the law since April 16th., 1911 on which date it began to be applied, up to March 31st., 1913. For the purpose we shall make use of the "Relatório da Junta do Crédito agrícola", presented by the Inspector of the Junta, M. José Manuel d'Assumpção, which has been published quite recently.

§ 2. THE WORK OF THE AGRICULTURAL CREDIT JUNTA, FOUNDED BY LAW OF MARCH 1ST., 1911.

The Agricultural Credit Junta began work on April 18th., 1913. It at once began to occupy itself as actively as possible with the application of the law, attempting to overcome the spirit of routine, the distrust and indifference, which were almost general. It addressed itself to persons whose political and social position inspired the farmers with confidence. In the circulars and communications forwarded to the Administrative Commission of the Municipalities, the Agricultural Associations etc., it attempted to show the advantages of the law. The Portuguese Central Agricultural Association (Central Agricultural Syndicate) had preceded the Junta in this diligent propaganda that it has not yet ceased, for it still continues to send lecturers everywhere. The two institutions have divided the work.

The Junta carries on its work in the north of the country; the Central Association acts in the South. The united efforts of these two institutions have produced some results but have not altogether realised what was expected.

In fact, 24 mutual agricultural credit banks have been founded and the banks existing previously to the law (1) have been led to modify their rule.

This small result is due to the fact that the Junta has met with difficulties and obstacles to its propaganda, at times insurmountable. Among these

(1) See *Bulletin of Economic and Social Intelligence*, 1st Year, No. 2, October, November, 1910, p. 184.

difficulties we must mention a lamentable indifference and a disheartening general want of enterprise, and above all the fact that the agricultural population was not in a position to understand the advantages of the law. On the other hand, private enterprise was necessarily hampered, for as the law had not yet been definitely approved, there was a general fear that amendments might be introduced that might render the efforts of new undertakings nugatory. If to this is added the fear easy to understand, but perhaps unjustified, of political changes and above all the discovery of certain defects in the law, it will be understood why the results have been such as we have reported. We must further remark the difficulties in the application of articles 27 and 37 of the law (1). In fact according to these articles, the unlimited liability banks can only receive money from the State up to the amount of their *capital increased* by 50 % of the value of the rural and urban real estate of all their members *exempt from mortgage, free and allodial*. Now this limitation is the cause of serious difficulties in the application of the law, for most of the rural real estate is burdened with charges, above all emphytectic. In fact, the restriction greatly reduces the power of the banks to borrow, and, consequently, also that of the members.

The Junta, however, thoroughly understood these difficulties, and, therefore applied to the Government for a modification of these articles, so that even encumbered real estate might derive some advantage from the law, as would be possible if the loan were calculated on the value of the real estate after deduction of the total amount of charges on it.

The amendments were accepted by the Government and brought before the Chambers by the Minister of Fomento, but as yet they have not been voted.

Another difficulty in the way of the successful application of the law is that the borrowers must insure their livestock, which it is not possible for them to do, as there are no livestock insurance societies in the country or rather only very rudimentary and undeveloped societies (2). Now, when it is considered that, in many regions, livestock represents the largest part of the *working capital* and, consequently, the only security the farmers

(1) "Art. 27. No member may borrow from a Bank a sum of more than 50 % of the value of the property mortgaged, of the pledge offered, or the income assigned, or 25 % of the *free and allodial* property belonging to him, his surety or sureties."

"Art. 37. The grants of loans to Banks organized on the principle of the joint and several unlimited liability of their members shall be limited to the amount of the capital of the Society increased by 50 % of the value of the rural or urban real estate, exempt from mortgage, free and allodial, of all their members, this value being calculated at the rate of fifteen times the taxable revenue of the said real estate as shown in the land register."

(2) See *Bulletin of Economic and Social Intelligence*, 1st. Year. No. 2. November, 1911, p. 181.

can offer, it will be understood that it is difficult to expect that agricultural credit as organized by this law will develop, until livestock insurance institutions have been founded.

There is another obstacle to the success expected from the law. In fact, according to it, the loans are made for one year, renewable once for an equal term and this provision prevents the carrying out of the land improvements also ordered by the law.

So the Agricultural Credit Junta has suggested to the Government the amendment of these provisions.

In conformity with this suggestion, the Government has laid it down in the new bill (art. 34) that, in addition to the loans the term of which must be limited to two years, there shall be also others for 15 years granted to farmers and farming associations. These latter loans will be granted to farmers for : (1) payment of mortgage debts of not more than 5,000 frs. at 6 % interest, on rural land; and for the redemption of quitrent dues of not more than 400 frs., including the lords' dues on sales; (2) for the carrying out of works, which, while increasing the value of the farm, render its working more remunerative. Loans for 15 years may be granted to agricultural associations for the purchase or preservation of land, installation for technical agricultural purposes, installations of warehouses, sheds for agricultural machinery, transport material etc.

The Agricultural Credit Junta has granted loans to the banks for an amount of 68:578 \$ 055 reis, or 342,980.37 frs. It has, however, not paid out more than 250,000 frs., as the difference, 22,890.27 frs., represents the amount reimbursed by the banks. During this period of the work of the Junta, the banks have asked for renewals of loans to the amount of 8:505 \$ 865 reis or 42,529.32 frs. This may be seen in the following table, which shows the amount of loans granted and that of loans for renewal of which application has been made etc. for each half year.

TABLE II. — *Economic S*

Number of Celleiros com- muns	Years	Cereals			
		Wheat — litres	Barley — litres	Rye — litres	M
52	1852	5,140,380	58,575	543,900	
14	1911	848,910	—	8,370	
(1) 15 litres (alqueire) of Wheat = reis 650 or 3.45 fr. 15 " " " Barley = 300 " 1.50 fr. 15 " " " Rye = 400 " 2 fr. * 15 " " " Maize = 400 " 2 fr.					

The 14 Celleiros Communs are managed by the Administrative Municipal Commissions and Administrative Parochial Juntas. When these institutions

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TABLE I.—Amount of Loans Granted and Renewals Authorized to the Bank by the Agricultural Credit Junta out of the Funds supplied by the State.

Periods in which the Grants were Made		Loans Granted		Renewals	
Year	Half Year	Amount	Interest	Amount	Interest
1911	Second	6:505 \$ 000	130 \$ 735	— \$ —	— \$ —
1912	First	6:254 \$ 250	155 \$ 020	660 \$ 000	6 \$ 490
1912	Second	35:550 \$ 490	741 \$ 565	4:730 \$ 000	62 \$ 350
1913	First	19:268 \$ 315	455 \$ 955	3:115 \$ 865	65 \$ 165
	or frs.	68:578 \$ 055	1:489 \$ 275	8:505 \$ 865	133 \$ 313
		342,890.27	7,446.37	42,529.32	669.57

There is another matter to which the Agricultural Credit Junta has extended its attention, namely the liquidation of the *Celleiros Communs*, institutions resembling the Italian *monti frumentari*.

In accordance with article 70, the Junta must proceed, as speedily as possible to the liquidation of the ancient *Celleiros Communs*, so as to allow of the increase of the special agricultural credit fund. The Junta has, therefore, begun by an enquiry instituted in all the municipalities of the country, but the results obtained have not been what was expected. In fact, after surmounting every kind of difficulty, the Junta obtained information in regard to 14 *Celleiros Communs*, the only ones remaining out of the 52 still existing on December 22nd, 1852. At that date these 52 had a capital of 123:288 \$ 051 reis, made up of the value of grain stored, real estate and cash. Now the 14 found by the Agricultural Credit Junta have a capital of 123:288 \$ 051 reis. Between 1852 and 1911 there has been a loss of 158:310 \$ 153 reis or 791,550.76 frs. as we may see in Table II below:

Celleiros Communs.

Value in reis	Value of Real Estate in reis		Cash	General Total in reis
	Rural	Urban		
116 \$ 500	47 \$ 050	7:091 \$ 160	35:243 \$ 494	281:598 \$ 204
109 \$ 300	—	—	86:278 \$ 751	123:288 \$ 051

understood that the Agricultural Credit Junta intended to liquidate the *Celleiros Communs* by the incorporation of their funds with the *agricultural*

credit funds, they made violent opposition, even denying the right of the Government to legislate in that sense.

When these protests were made, it seemed to the Junta that a question of law was raised, and, in order to settle it, it sought the advice of the *Procuradoria Geral*. The latter settled the difficulty, declaring it to be incumbent on the Junta to carry out the law on agricultural credit, that, if the municipal or provincial administrative commissions considered their rights affected, they must use the means that the laws and the Constitution provide; but the Junta must carry out the provisions of the law of March 1st, 1911.

The liquidation of the *Celteiros Comuns* will therefore shortly commence and next year the Junta will certainly be able to grant loans with the funds of these institutions.

In conclusion, the Agricultural Credit Junta has done its best to arrive at the ends proposed by the law. As we have seen, the results have not been such as were expected, but account must be taken of the opposition and obstacles the Junta has had to overcome.

In fact, in spite of every thing, it has been able to found banks which have succeeded in lowering the rate of interest to 5%, while, according to M. D. Luis de Castro, Professor of Political and Rural Economy at the Superior Agricultural Institute, in the greater part of the country where there are none of these banks, the rate is generally 20% (1)

§ 3. THE DEVELOPMENT OF THE MUTUAL AGRICULTURAL CREDIT BANKS.

The report of the Agricultural Credit Junta deals with 26 Banks, only 16 of which have begun to work. To this number 3 others must be added founded after March 31st, 1913, the date up to which the report is made out.

The form preferred for the constitution of the banks is that of unlimited joint and several liability societies. In fact, there are 26 unlimited liability banks and only three in which the liability is limited.

The principal reason for this preference is not, as might be supposed, that the members have at once understood the advantage they may thus derive. It is principally because it is far easier to constitute the banks in this way, because money has not to be spent to enable them to begin working. When the Agricultural Credit Junta, in order to settle the amount of the credit to be granted to the banks, asked for a statement of the real estate belonging to the members, the latter understood the liability they were incurring and some of the banks did not commence operations.

(1) See *Bulletin of Economic and Social Intelligence*, 1st Year, No. 2, October-November, 1910, p. 174.

The credit allowed to the 15 unlimited liability banks which were working on March 31st., 1913, amounted to 110,085 \$ 068 reis, or 550,429.84 frs. In conformity with the law of 1911 it is equal to the capital of the bank (monthly contributions, entrance fees, profits, inheritances etc.) increased by 50 % of the value of the rural and urban real estate of the members, exempt from mortgage, free and allodial.

The credit allowed the Mutual Agricultural Credit Bank of Elvas, the only limited liability bank working, amounted to 18,799 \$ 724 reis or 93,998.67 frs. The total credit allowed to the Banks working is 128,885 \$ 702 reis or 644,428.51 frs.

The real estate taken into consideration in determining the credit to the Banks consisted of 1,415 landed estates, of which 1,172 were rural distributed as follows:

Banks	Number of Rural Holdings	Number of Urban Holdings	Total
—	—	—	—
Acaçovas	46	27	73
Alcochete	16	4	20
Aljustrel	20	14	34
Alcobaça	13	5	18
Bombarral	93	35	128
Castro Verde	6	6	12
Mourão	69	18	87
Pernes	7	1	8
Salvaterra de Magos	14	8	22
S. Theotonio	40	3	43
Serpa	293	42	335
Vianna do Alentejo.	8	4	12
Villa Flor	533	72	605
Lourinhã	14	4	18
Total	1,172	243	1,415

The banks working on March 31st., 1913 had about 921 members; the other banks founded but not yet working had about 94. We may therefore calculate the general total of members at 1,015. This seems a very poor result, when it is remembered that about 65 % of the population of Portugal is agricultural.

We give below a table showing the principal statistics relating to the constitution of the mutual agricultural credit banks.

TABLE III. — Mutual Agricultural Credit Banks.

Number of Banks	Head Quarters	District	Form of Liability	Date of Approval	Date of Commencement of Work	Credit Allowed	Number of Members
1	Vila Flor (1)	Braganza	Unlimited	March 30th, 1912	September 18th, 1912	6:615 \$ 392	69
1	Fernela	Aveiro	Limited	March 1st, 1913	—	— \$ —	23
	Bombaria		Unlimited	July 4th, 1911	July 16th, 1911	11:334 \$ 788	113
3	Alcoberga	Idria	"	June 22nd, 1911	October 21st, 1913	2:872 \$ 281	23
	Alvorinhas		"	March 22nd, 1913	—	— \$ —	14
	Carrazo		"	June 14th, 1911	January 3rd, 1913	— \$ —	86
3	Pernes	Santarem	"	June 24th, 1911	February 28th, 1913	2:833 \$ 777	24
	Salvaderra de Magos		"	December 9th, 1911	May 15th, 1913	1:220 \$ 750	58
	Vila Nogueira de Azeitão		"	June 2nd, 1911	—	— \$ —	14
	Alemaquer		Limited	June 14th, 1911	—	— \$ —	—
	Alcochete		Unlimited	July 4th, 1911	March 1st, 1913	1:555 \$ 365	36
7	Setubal	Lisbon	"	December 23rd, 1911	—	— \$ —	—
	Lourinha		"	December 28th, 1912	March 5th, 1913	2:197 \$ 802	16

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[1] The Banks, the headquarters of which are printed in Italics, were working on March 1st, 1913.
[2] Banks founded since March 1st, 1913.

We have already seen that the banks have received several loans from the Agricultural Credit Junta. With the amount of these and that of the sums deposited with them, they have granted 500 loans to their members. The amount of these latter loans has been 134 : 786 \$ 945 reis or 673,934.7 frs. The State contributed 67 : 578 \$ 055 reis or 342,890.27 frs. The rest amounting to 66 : 208 \$ 890 reis or about 331,044.45 frs., represented loans made by the banks with their own capital. Of this last amount, 28 : 76 \$ 686 reis, or about 143,838.53 frs was distributed as follows :

	Banks	Deposits
Credit Bank of Serpa	14:994	\$ 125 reis
» » Elvas	7:549	\$ 041 *
» » Reguengos	3:545	\$ 000 *
» » Mourão	2:227	\$ 000 *
» » Salvaterra de Magos	241	\$ 167 *
» » Vianna do Alentejo	153	\$ 490 *
» » Cartaxo	100	\$ 000 *
» » Bombarral	57	\$ 867 *
		<hr/> 28:767 \$ 686 reis

The loans were secured on pledge, mortgage or the signature of a surety. The loans on signature of sureties, in number 292, were for an amount 385,947.55 fr. or 57.26 % of the total; those on pledge were for an amount of 220,832.50 frs. or 28.31 % of the total and were 143 in number; those granted on mortgage represented 9.96 % of the total, their number was 47 and their amount 67,154.67. This shows the preference of the farmers for loans secured by signature of sureties.

EFFECTS OF THE LAW OF MARCH 1ST., 1911 ON AGRICULTURAL CREDIT 75

TABLE IV. — Number and Amount of Loans Granted by the Mutual Agricultural Credit Banks
up to March 31st, 1913.

Mutual Agricultural Credit Bank	Loans Secured on Signature of Sureties		Loans on Pledge	Loans on Mortgage	Total	Capital Belonging to the Banks	State Subventions
	Amount	Amount					
Elvas	114	43,305 \$ 740	10	12,900 \$ 000	—	124	56,205 \$ 740
Ajuslrel	9	3,926 \$ 500	6	1,850 \$ 000	7	11,175 \$ 410	6,981 \$ 910
Alcoide	2	450 \$ 000	—	—	2	450 \$ 000	450 \$ 000
Salvaterre de Magos	5	430 \$ 000	12	4,555 \$ 500	5	296 \$ 000	11,181 \$ 500
Villa Flor	5	825 \$ 700	2	2,850 \$ 000	—	7	3,675 \$ 700
Castro Verde	1	200 \$ 000	1	600 \$ 000	—	2	800 \$ 000
Alcoberga	3	9,000 \$ 000	4	750 \$ 000	1	100 \$ 000	1,750 \$ 000
S. Theotonio	11	1,225 \$ 000	—	—	—	11	1,255 \$ 000
Pernas	—	—	—	—	—	500 \$ 000	20 \$ 000
Serpa	42	11,478 \$ 075	20	10,000 \$ 000	42	9,550 \$ 025	1,041
Vilaça do Alemão	10	1,315 \$ 000	2	480 \$ 000	—	12	1,795 \$ 000
Alcaçovas	19	4,666 \$ 495	—	—	—	19	4,666 \$ 495
Mourão	53	3,743 \$ 000	—	—	—	53	3,743 \$ 000
Requejões	8	3,545 \$ 000	—	—	—	8	3,545 \$ 000
Bombarial	6	719 \$ 000	85	1,181 \$ 000	14	1,769 \$ 500	1,669 \$ 000
Cartaxo	3	100 \$ 000	—	—	—	3	100 \$ 000
Lourinhã	1	300 \$ 000	1	100 \$ 000	—	2	400 \$ 000
Total	292	77,189 \$ 510	143	44,166 \$ 500	70	13,420 \$ 935	505
or francs	—	385,947.55	—	220,832.50	—	67,154.67	—
						673,934.72	331,044.45
							342,890.27
						66,528 \$ 890	68,578 \$ 055

In July, 1913, according to the information supplied by the Agricultural Credit Junta, 349 loans were granted by the banks, classified as follows in accordance with the period for which they were granted.

Term	Number of Loans	% of Total
2 months	5	1.10
3 " "	70	15.95
4 " "	37	8.42
5 " "	16	3.70
6 " "	119	27.10
7 " "	14	3.18
8 " "	7	1.60
9 " "	11	2.50
10 " "	7	1.60
11 " "	2	0.45
12 " "	151	34.40
	439	100.00

We see that there was a preference for loans for a term of six months (27.10 %) or a year (34.40 %). The total amount of the loans now current is 618,348.65 frs.

From table V below, relating to the loans granted up to March 31st, 1913, it will be found that 68.21 % were for amounts between 100 frs. and 1,000 frs., 16.83 for amounts between 1,000 frs. and 2,500 frs. and 12.08 for amounts between 2,500 frs. and 7,500 frs. The small farmer, therefore, evidently has the preference as indeed the law on agricultural credit enjoins.

TABLE V. — *Loans Granted by the Mutual Agricultural Credit Banks up to March 31st., 1913.*

From reis	Loans —		Total —
	reis	reis	
1 \$ 000	to	5 \$ 670	2
5 \$ 671	to	10 \$ 000	5
10 \$ 001	to	20 \$ 000	26
20 \$ 001	to	50 \$ 000	104
50 \$ 001	to	100 \$ 000	96
100 \$ 001	to	150 \$ 000	42
150 \$ 001	to	200 \$ 000	52
200 \$ 001	to	250 \$ 000	22
250 \$ 001	to	300 \$ 000	30
300 \$ 001	to	350 \$ 000	9
350 \$ 001	to	400 \$ 000	15
400 \$ 001	to	450 \$ 000	3
450 \$ 001	to	500 \$ 000	26
500 \$ 001	to	550 \$ 000	2
550 \$ 001	to	600 \$ 000	11
600 \$ 001	to	650 \$ 000	2
650 \$ 001	to	700 \$ 000	6
700 \$ 001	to	800 \$ 000	6
800 \$ 001	to	900 \$ 000	2
900 \$ 001	to	1000 \$ 000	10
1:000 \$ 100	to	1:500 \$ 000	14
1:500 \$ 100	to	2:000 \$ 000	5
2:000 \$ 100	to	2:500 \$ 000	3
2:500 \$ 100	to	3:000 \$ 000	2

As regards the purposes for which the loans are granted, we see from table VI that the agriculture of the districts in which the banks are situated is profited by the law on agricultural credit.

Although the official documents do not give the amount of the loans granted but only their number, we see that those granted for payment of agricultural labourers' wages are the most numerous. This is due to the acts that their work sometimes obliges the farmers to apply for loans and also that the claims of the labourers have not always been allowed for in estimating the expenditure. Although this is the chief reason for which loans are applied for, it is, however, not the only one. Loans for the extension of the cultivated area, for bringing new land under cultivation, for the utilisation of fallow land etc., are also very numerous and bring into relief the new tendency of Portuguese agriculture. It is now becoming enterprising, whilst, up to the present, as capital could not be obtained at a sufficiently low rate of interest, nothing could be undertaken.

TABLE VI.—*Purposes for which Loans were granted by the Mutual Agricultural Credit Banks up to March 31st, 1913.*

§4. INFLUENCE OF THE LAW ON THE DEVELOPMENT OF AGRICULTURAL
SYNDICATES AND AGRICULTURAL ASSOCIATIONS.

The law of March 1st., 1911, of which we have already shown the first effects on the development of agricultural credit in Portugal in the first two years after its application, has also influenced, although indirectly, the foundation and progress of the agricultural syndicates and other associations.

In fact in art. 12, the law lays it down that, to belong to a Mutual Agricultural Credit Bank, a farmer must first be a member of an agricultural syndicate or an agricultural association. The associations and syndicates may also themselves be members of the banks and enjoy the advantages they offer their members. We may therefore very well understand that a large number of these associations have been formed and that those already existing have made very appreciable progress. This is, in fact, what we see in the following table in which the number of syndicates, founded each year since the laws of April 5th. and 7th., 1894 on syndicates, is shown.

Years	Number of Agricultural Syndicates Founded	Years	Number of Agricultural Syndicates Founded
—	—	—	—
1894	1	1905	9
1895	2	1906	0
1896	5	1907	8
1897	7	1908	3
1898	0	1909	1
1899	8	1910	1
1900	5	1911	23
1901	5	1912	4
1902	2	1913	7
1903	1	Total . . .	107
1904	11		

Since the publication, therefore, of the law of March 1st., 1911 on agricultural credit, 38 syndicates have been founded, 27 of them immediately after the law. This number had never been previously reached in the time, which clearly shows the effect of the law. It would seem from these figures that at the present moment there must be 107 syndicates in the country, but really there are only 63, as many have ceased working for various reasons. We give below a list of those now existing (1).

(1) Cf. *Bulletin of Economic and Social Intelligence*, No. 2, Oct.-Nov., 1910, p. 188.

Agricultural Syndicates existing on March 31st., 1913.

1	<i>Associacao Central de Agricultura.</i> <i>(Central Agricultural Syndicate)</i>	Lisbon	33	Agricultural Syndic. of Gafete
2	<i>Federation of Agricultural Syndicates,</i> Lisbon		34	" " " Lagos
3	<i>Agricultural Syndic. of Albergaria</i>		35	" " " Lourinha
4	" " " " Alcaçovas		36	" " " Marco de Canavezes
5	" " " " Alcobaça		37	" " " Mogadouro
6	" " " " Alcochete		38	" " " Moita do Ribejo
7	" " " " Aldeia Gallega		39	" " " Montalegre
8	" " " " Alemquer		40	" " " Montemor-o-Novo
9	" " " " Aljustrel		41	" " " Mourão
10	" " " " Alpiarça		42	" " " Nellas
11	" " " " Alter		43	" " " Odemira
12	" " " " Alvorninha		44	" " " Ourique
13	" " " " Arrayollos		45	" " " Penafiel
14	" " " " Aviz		46	" " " Pernes
15	" " " " Azeitão		47	" " " Portalegre
16	" " " " Baixo		48	" " " Reguengos
17	" " " " Beja		49	" " " Saireu
18	" " " " Bombarral		50	" " " Salvaterra de Magos
19	" " " " Borba		51	" " " Santarem
20	" " " " Campo Maior		52	" " " S. Theotonio
21	" " " " Carrazeda de Antunes		53	" " " S. Thiago de Castem
22	" " " " Cartaxo		54	" " " Serpa
23	" " " " Castello de Paiva		55	" " " Setugal
24	" " " " Castro Verde		56	" " " Taboão
25	" " " " Coimbra		57	" " " Thomar
26	" " " " Covilhã		58	" " " Vianna do Alentejo
27	" " " " Eivias		59	" " " Vieira do Minho
28	" " " " Estremoz		60	" " " Villa do Conde
29	" " " " Evora		61	" " " Villa Flor
30	" " " " Famalicão		62	" " " Villa Nova de Famalicão
31	" " " " Fermeira do Alemtejo		63	" " " Villa Nova da Tazem

Several of these syndicates have benefited directly or indirectly through the Mutual Agricultural Credit Banks.

For example, according to the last report, thanks to the Elvas Mutual Agricultural Credit Bank, which lent it the necessary money, the Elvas Agricultural Syndicate was able to purchase for its members, a machine thresher and a press for fodder for the respective amounts of 13,000 and 2,375 frs. By means of another loan it obtained for its members manure at a lower price than they paid previously, that is to say 1,576.50 tons for 101,537.77 frs.

The loans it has received from the Bank have attracted to it a certain number of members who understand all the advantages of membership of a syndicate. Thus many agricultural syndicates have shown unusual activity. The one referred to has even insured its members for 792,440 frs ; it has published the first volume of the *Stud Book* of the district. It has arranged for an annual examination of the horned cattle, organized agricultural shows and fairs and finally brought about an understanding between labourers on strike and the landowners. Another agricultural syndicate, that of Nellas, has taken the initiative in the foundation of a co-operative society for production and sale of fruit and early produce. And, in fact, thanks to the action of this syndicate, the first *Cooperativa Pomicola do Dão* has just been founded. It is an unlimited liability co-operative society with a minimum capital of 200 \$ 000 reis, founded with the following objects : (1) the promotion of the collective sale of the fruit and early produce of its members, and, for this purpose, it will seek for markets at home and abroad ; (2) obtaining for its members every means for improving their produce ; and with this object, it may provide them with seeds, manure, transport material, insecticides, anticryptogamic substances etc ; (3) the education of members in fruit cultivation and horticulture, by means of lectures, annual competitions etc ; (4) contracting for the transport by land and sea at low rates, of agricultural produce, manure, seeds etc ; (5) foundation of agricultural insurance institutions ; purchase of machines for drying fruit and installation of jam factories ; (6) foundation of commercial agencies or appointment of agents and representatives on the markets on which it intends to sell ; (7) establishment of shops in the most suitable places etc.

We see therefore, from the above, the direct and indirect influence the law has had on the foundation and development of the agricultural associations.

SWITZERLAND.

CENTRALIZATION OF BANKS AND THE QUESTION OF THE ESTABLISHMENT OF A FEDERAL MORTGAGE BANK.

SOURCES :

- LAUR. (Dr. Prof. E.): Secretary of the Swiss Peasants' Union. *Rapport au sujet de la fondation de la Banque hypothécaire fédérale présenté au Département Fédéral des Finances (Report on the Establishment of the Federal Mortgage Bank, presented to the Federal Department of Finance)*. Published in the Official Organ of the Swiss Peasants' Union, "Le Paysan Suisse". May, 1913.
- JÖER (Dr. A.): Secretary General of the Swiss National Bank; *Zur Frage der Errichtung einer Schweizerischen Hypothekenbank (The Question of the Establishment of a Swiss Mortgage Bank)*, Zurich, Füssli, 1911.
- MEYER (Dr. A.): Editor of the "Neuen Zürcher Zeitung": *Die Konzentration in Schweizerischen Bankwesen (Centralisation of Swiss Banks)*, in "Taschenkalender für Kaufleute", 1912, pages 38-48.
- NAEF (Dr. E.): *Zür Forderung der Meliorationen vermittels der Amortisation-Hypothek. Eine Landeskultur-Rentenanstalt (The Extension of Land Improvement by means of Mortgages to be Paid off in Instalments. A Credit Institution for Improvements)*. Frauenfeld, 1911.
- PASQUIN (L. G. du): *Zur Frage des Bodenkredits in der Schweiz (The Problem of Land Credit in Switzerland)*, in the "Schweizerische Blätter für Wirtschafts- und Sozialpolitik." 1913, Nos. 4-5, pp. 97-121.
- PLUCERT-SARNA (Dr. N.): *Die Konzentration im Schweizerischen Bankwesen (Concentration of the Swiss Banks)*. Zurich, Speidel, 1911.
- RUHLAND (Professor G.): *Möglichst billiger Kredit, rationelle Verschuldungs-beschränkung und richtige Wertschätzung des landwirtschaftlichen Grundbesitzes (Credit on the Best Terms, Scientific Dismortgaging and Just Valuation of Agricultural Landed Property)*, Report to the Swiss Peasants' Union. Berne, 1899.
- WETTER (E.): *Zur Frage einer Schweizerischen Hypothekenbank (The Question of a Swiss Mortgage Bank)*. Report presented to the Seminary of Commercial Economics of the University of Zurich in the Summer of 1911, Basel, Krebs, 1911.

§ I. FROM LOCAL SYSTEMS TO A CENTRALIZED ECONOMIC SYSTEM IN SWITZERLAND.

M. Georges Gariel, Professor of Political Economy in the University of Fribourg, in a recent work (1), observes as others before him have done, on the subject of Swiss policy, that for one hundred years all the questions

(1) *La centralisation économique en Suisse. L'œuvre économique de la Confédération depuis 1848*. Paris, Rousseau, 1912.

which have arisen may be summed up in that of centralisation. The phenomenon, consisting in the transformation by which isolated local systems of economics have, in the course of three centuries, been replaced by a large national system, which is observable in Switzerland, is not peculiar to that country, for it is to be seen in other parts of Europe (1).

This phenomenon manifests itself in the world of industrial production, traffic and of commerce and also in the organization of banks. We find full explanation of this in the fact that with the growth of economic industry higher profits are generally yielded by large enterprises than by small ones. In Switzerland, the movement which has had to contend with natural obstacles in the topographical formation of the country and the administrative and political isolation so characteristic of it, the limited market, together with the existence of a large number of economic systems often co-ordinated but independent, has already shown itself in the organization of banks, and is manifesting itself more and more in the organization of mortgage credit institutions, especially, since the codification of private law for all the cantons.

We shall see this centralisation the more plainly from a study of the following table in which the banks are classified according to the amount of their capital in the years 1883 and 1908.

Banks with a capital :		1883 No.	1908 No.
of 500,000 fr.	258	148	
of from 500,000 fr. to 1 million fr.	17	36	
" 1 million to 5 million fr.	54	62	
" 5 " " 10 " " "	12	20	
" 10 " " 20 " " "	12	18	
above 20 million frs.	2	12	

In this period of 25 years the number of the banks with a capital not over 500,000 fr. has decreased by half, whilst that of the banks with a larger capital has increased. It is worthy of remark that the number of those with a capital of twenty millions increased from 2 in 1883 to 12 in 1908.

This centralisation of Swiss banks has come about in three ways ; 1st. by participation of banks in the affairs of other financial institutions, 2nd. by fusion with them and establishment of branches and 3rd. by means of agencies and savings-banks.

[1] See the following works : RIJSEN (Dr.) : Die Deutschen Grossbanken und Konzentration im Zusammenhang mit der Entwicklung der Gesamtwirtschaft in Deutschland. (*The Large German Banks and their Centralisation in connection with the Development of Economic Conditions in Germany*). Jena, Fischer 1910 — FANNO (Professor Marco) : Le Banche e il mercato monetario (*Banks and the Money Market*), Rome, Athenaeum, 1910.

The financial centralisation of institutes for mortgage credit has no it is said, advanced equally with that of the commercial and industrial banks.

Many reasons for this are adduced, the chief being that of the formation of large establishments in place of smaller, each with its own circle of clients which, if not a necessary condition, is certainly a circumstance which has its influence, in the formation of the large banks. At the present time in every country, but more particularly in Switzerland, this process of transformation of small into larger undertakings is more rapid in the field of industry and commerce than in the field of agriculture. Farms in Switzerland being generally small, and restricted by reason of the peculiar ethnographical and topographical circumstances to very limited areas, this was naturally, especially in past times, a great obstacle to the formation of large mortgage credit institutions calculated to absorb the smaller.

But this obstacle, arising as it did from natural causes, has now been we may say *crystallised* by the particular legal forms, which in every canton now regulate the special forms of security for land credit.

§ 2. THE PROBABLE INFLUENCE OF THE NEW CIVIL CODE ON THE DEVELOPMENT OF MORTGAGE CREDIT.

In an article which appeared in a former number of this bulletin (1) we observed that before the coming into force of the new Swiss Code, on January 1st., 1912, the legislature of that time recognised about sixty different forms of land mortgage in this small country.

How was it possible to constitute and administer a great institution which, as working in a larger area, would have to take account at the same time of the different usages and widely differing legislative regulations of the districts?

The introduction of the Civil Code has certainly smoothed away all these difficulties and exercises a beneficent action on land credit, by facilitating the circulation of capital from those places where savings are most abundant and the rate of interest is less, to those places in which the need of credit is greater.

The unification of the rules concerning land credit also helps to facilitate the constitution of larger financial organisations.

The new Civil Code has not however confined itself to one form alone of land security, but, partly through respect for the traditions of the country, at the same time keeping in mind the multifarious results of varied species of mortgage credit, it has authorised three forms:

(1) Bulletin of Social and Economic Intelligence, IIInd. year, no. 9, September 30th., 1911 p. 161 and following, "Unification of the Provisions for Security on Real Estate and the Land Register in the New Swiss Code."

- (a) *hypothèque* properly so called, for the security of any debt, present, future or simply contingent :
- (b) *cédule hypothécaire*, guaranteeing a personal negotiable debt by mortgage on real estate;
- (c) *Lettre de rente*, a negotiable bond on the real estate burdened with charge on land, but excluding all personal obligation on the part of the owner, and not showing the reason of the debt.

The new Code regulates mortgages in accordance with legal principles, in conformity with the dictates of science and the practical needs of the nation.

We have already given these particulars in the article to which we have referred.

As regards our present subject, we shall say again that the new Code rightly does not lay down rules as to the economic conditions to be observed with regard to contracts for loans, so as not to hinder the free development of credit. By article 705, it gives complete liberty to contracting parties to fix a rate of interest for themselves, subject, however, to the provisions of the laws against usury contained in the Penal Code. In fact, the Civil Code which is to serve for all the Cantons, however diverse their financial conditions, and during a long period of years, could not possibly have profitably fixed a maximum rate of interest. The experience of the Canton of S. Gall afford a discouraging example of the influence the law can exert on the financial operations by fixing the rate of interest. The legal rate in S. Gall is 4% and the landed proprietors were unable to contract loans.

The new Code does not interfere with cantonal laws and therefore each canton may fix the maximum of interest for guaranteed credit on landed property.

This rule had hitherto prevailed in several Cantons.

The Canton of Berne imposes a rate of 3% on *lettres de rente*. In that of Lucerne, a law of June 1st, 1886 decrees that the rate of interest on "Gulden" and "Zahlungsbriebe" must not exceed 4%. In Zug, interest on mortgages must not exceed 5%. The "Güllenrecht" of Engelberg fixes a maximum of 5%. In the Canton of Schwyz, in 1898, interest was fixed at 4% for the new "Grundpfandverschreibungen", and at 5% for the old: in the Canton of Appenzell R. I., it is 4½ for the "Zettel". In the canton of Appenzell R. E., the maximum is 5%, in that of S. Gall, since 1892, 4½%. Thurgau a rate above 5% is considered usurious. At Neuchatel, and in the Cantons of Fribourg and Ticino, the highest rate of interest is 5% for civil loans, and 6% for commercial loans. The Cantons of Glarus, Aargau, Uri, Lucerne and Valais generally prohibit any rate of interest on loans over 5%.

The new Civil Code, with its rules (arts. 942-977), introducing a land register into Switzerland, marks a great advance. It is easy to understand the importance of such rules for the development of credit, and of the mortgage credit institutions, when we remember that except a few cantons (Vaud, Soleure, Basle-City, Schwyz) Switzerland was be-

hind most other countries, which for a long time had possessed ample and complete legislation with regard to landed property.

Before the introduction of the new Code, two systems for transmission of property were in vigour in the other Cantons, viz. the system of *legal proof* and the French system of *registration*.

The land register, instituted by the new Code, includes: 1st. the *ledger*; 2nd. the *complementary documents* (plans, lists, legal documents); 3rd. the *daybook*. Landed property, and definite and permanent rights over real estate and mines are entered as real estate in the land register.

Each holding is given a leaf and a number in the ledger. Several holdings may be entered on one leaf with the consent of the proprietor.

In the land register there are entered: 1st. the landed property, its charges upon it and mortgage claims on real estate; 2nd. personal rights such as those of preemption; 3rd. temporarily, the names of those who allege a real right.

Leaving aside the regulations which guarantee the rights of owner creditors and outsiders in good faith, we shall confine ourselves to mentioning that, with a view to greater security for the investment of capital in mortgages, the cantons are made liable for any damage caused by the officers entrusted with the care of the books.

§ 3. RESOLUTIONS FOR THE ESTABLISHMENT OF A FEDERAL MORTGAGE BANK.

From the time of the debate on the bill for the new Civil Code until now, when it has come into force, eager discussions have been taking place in agricultural circles as to the expediency of the institution of a federal mortgage bank, in order that the conditions under which loans might be contracted should be the same in all the cantons, and that in Switzerland an impulse might be given to a policy aiming at the dismortgaging of landed property and its improvement, a policy which in other countries has made great strides with beneficial results to agriculture. The supporters of this project are also convinced that the Confederation, through the confidence it inspires, will succeed in obtaining the requisite capital for agriculture in foreign countries at a moderate rate of interest.

When the new Civil Code was under discussion, Dr. Prof. E. Lau, secretary of the Swiss Peasants' Union, often insisted on the fact that the unification of the law would itself lead to the institution of a federal mortgage bank.

Furthermore, at the time of the preliminary deliberations on the subject of a national bank of issue, the meetings of the Swiss Peasants' Union expressed the opinion that at the same time arrangements might be made for mortgage credit. It was clearly understood that the mortgage bank must be distinct from the Bank of Issue, but it would have given satis-

ion if to the National Bank a department could have been added, with a separate bookkeeping, for the purpose of giving credit for improvements. But technical considerations prevented the realisation of his idea.

The question had previously been studied by men like Dr. Naef and Prof. Uhlmann, and by long established associations such as the Zurich Peasants' League, presided over by Herr Schmid of Vollikon. They had suggested the institution of different forms of central banks to facilitate rural credit, the extinction of debts and the improvement of rural landed property and of systems of cultivation.

This interchange of ideas and interests found expression in Parliament in a motion brought forward by Scherrer-Füllmann on June 17th, 1910 in these words : "The Federal Council is invited to examine the question whether it would be expedient to establish a Swiss mortgage bank when the new mortgage law comes into force, and how such foundation may be effected and to present a report and proposals on the subject."

The motion was advocated in the Federal Council by its proposer at the session of March 31st., 1911.

He pointed out that the development of manufactures had withdrawn a large amount of capital from rural and urban real estate credit, and that consequently the rate of interest on mortgage loans was increased.

The cantonal banks had done much to supply the financial necessities of landed property, but notwithstanding their assiduous and useful labours there was still need for a central institution of mortgage credit and as many of the supporters of the Cantonal Banks desired an institution of this kind, it must be remembered that, without compromising the future of the cantonal institutions, something better adapted to the requirements of landed property may be devised.

The annual increase of the land debt in Switzerland is at least between 160 and 180 million francs, and the present banks, according to Scherrer-Füllmann, do not possess sufficient means to pay this amount.

As a result of the coming into force of the mortgage system, the excellence of the provisions of which is acknowledged even in foreign countries, land bonds issued by a federal institution, which would offer the best guarantees, might circulate even abroad and obtain capital for Switzerland at a low rate.

Money being lent at a lower rate, the farmers would be able to pay the costs of mortgage. The Federal Mortgage Bank would not enter into injurious competition with the Cantonal Banks, but would rather furnish them capital raised by means of mortgage bonds in return for *lettres de change* or bonds of equal value. The Hon. Scherrer-Füllmann concluded his speech by declaring that various classes of society would derive much material advantage from a reduction of the rate of interest on mortgage credit and from the increased number of financial transactions ; not only landed proprietors who would be less burdened with debt, but also farmers, tenant farmers and consumers would benefit. The establishment of a federal mortgage bank would be a lasting boon to agriculture.

The bill for the creation of this bank, naturally well received and supported among the peasants, still met with much opposition, both on principle and because it must inevitably disturb private interests.

Prof. Laur, Secretary of the Swiss Peasants' Union, observes that in Switzerland so numerous are the interests connected with the various banks large and small, than an innovation of this kind is bound to meet with great opposition, more pronounced during the period of public discussion than at the moment of the decisive vote.

Councilor Comtesse in the Federal Council expressed doubts as to a real necessity for such a Bank, and as to its power of procuring capital at a lower rate of interest than that asked by existing institutions of mortgage credit.

Dr. Adolf Jöhr, General Secretary of the National Bank of Switzerland, also stated that it would be difficult for the contemplated bank to lower the rate of interest.

At present the organization of mortgage credit is extraordinarily rich and decentralised. There are in fact 28 institutions of mortgage credit either belonging to the State or working with State support 60 private mortgage banks, and 104 savings and loan banks engage in credit business. In nearly every canton the landed proprietor requiring credit may choose between private and State institutions. We cannot hope, continued Dr. Jöhr, that a great influx of capital will result from the purchase of mortgage bonds issued by the proposed bank, either in Switzerland, where capitalists and those who have saved money now invested with a certain degree of security are seeking more profitable investments, or abroad, where the conquest of the money market — as in London or in France — is difficult and costly.

There is a weak point, according to Dr. Jöhr, in the present banking system. This is, that the banks obtain the capital for mortgage loans chiefly by means of bonds of too short maturity or deposits in the saving banks, liable to be withdrawn at any moment. This system reacts unfavourably upon the stability of the interest on mortgage loans.

It is not necessary to enter into the merits of these discussions, but we have given the substance of them in order to afford a glimpse of the financial problems not yet solved in Switzerland.

The readers of our *Bulletin*, now acquainted with the objections to the establishment of a federal mortgage bank, will remember that in many countries where there was not enough capital for the requirements of agriculture, the State has acted as intermediary between foreign capitalists and the national farmers and by offering its own guarantee has succeeded in attracting immense capital from abroad to rural land investments.

But they should also remember the special political and economic conditions under which the question must be decided in Switzerland, in a small confederation in which each canton, either for economic or political reasons, shows a certain tendency to preserve its present position, and to resist the movement towards economic and political centralisation, a movement which has already been widely successful.

Therefore, the special conditions in Switzerland differing so much from those of other countries, we cannot quite simply consider as suitable the Helvetic Confederation solutions of social problems which have been proved adequate for other countries. We should have to enter into political considerations and estimates the nature of this Bulletin would not admit.

We shall, however, give the important statement made by Prof. Dr. E. Laur, Secretary of the Swiss Peasants' Union, at the request of the Federal Department of Finance, as to the desirability of the establishment of a federal mortgage bank. This statement is especially valuable, not only because of the details illustrative of the state of the mortgage market in Switzerland, but also because of the important suggestions as to the special duties the proposed federal bank would have in regard to agriculture.

The function of this bank, the Professor says, will be to regulate mortgage credit and we may expect that its action will in future tend to equalize the interest paid on mortgages.

The Cantonal Bank of Zurich has for some years been able to lend money at a rate $\frac{1}{4}$ or $\frac{1}{2}$ per cent lower than the other cantonal banks. We cannot understand why the agriculturists of other cantons should pay a higher rate of interest than those of Zurich.

The capital possessed by a Federal Bank would excite salutary competition, and would tend to keep down prices in the money market.

The Federal Mortgage Bank would also introduce *lettres de rente* into the cantons where they are still unknown.

Prof. Laur says that, when bankers of high standing in these cantons hear *lettres de rente* spoken of, they only smile or shrug their shoulders, for they not only do not wish to hear of them but they seek to prevent their circulation becoming general. But a federal mortgage bank must extend the use of such *lettres de rente* to the whole of Switzerland, if it is desired to attain the object at which the new Swiss Code aims through their use. The banks would then be compelled by competition to circulate such instruments of credit among farmers.

A mortgage bank, Prof. Laur continues, ought also to grant credit on other kinds of security.

Nevertheless, it should not grant loans beyond the limits usual among existing banks.

From the first it ought to be specially prudent while as yet it has no knowledge of the persons who come to ask for money, nor of the local conditions. The mortgage bank will run no risk with *lettres de rente*, because they have the advantage of fixing a limit to the debt on the basis of an official estimate which offers the surest guarantee.

But a *lettre de rente* will not of itself aid those who are deeply in debt and have most need of assistance.

Dr. Laur therefore in his reports to the Federal Finance Department advised that when the Mortgage Bank was founded it should have a *local department of public utility*. Deficits in this department should be supplied by grants from the Confederation and out of by the profits of the bank. The department should lend money to experienced farmers be-

yond the limits the Bank fixes for its loans. These debtors should be required to submit their accounts to the Peasants' Union or some similar institution. The "Märkische Hauptvermögens-Direktion" of Berlin is a department of this kind. All landed property under the supervision and guidance of this institution enjoys large credit. For a long time past manufacturing firms have had recourse to similar institutions. The larger banks keep accountants at the service of their debtors and are represented by their managers on the administrative councils. The mortgage bank might thus without incurring serious risk become an institution of great importance, which would aid the foundation of independent agricultural enterprises and ensure their existence.

Prof. Laur thinks that another work ought to be entrusted to the proposed department of public utility; viz. the association of the question of the *dismortgaging of land with the creation of homesteads*. The Professor says that the time has perhaps not yet come for the foundation of such an institution or to make the establishment of the mortgage bank dependent upon it. His idea is to transform holdings of moderate extent into homesteads which could neither be burdened with debt nor divided. We may suppose that the transformation would be accomplished in the following way. Farmers, even experienced farmers, finding themselves in difficulties would appeal to the bank for means for paying their debts; those who could give a sufficient guarantee would go to the principal department, others to that of public utility. The debtor would pay a moderate interest of which at least half would go to the extinction of existing mortgages. The deficit of the department of public utility, caused by expenditure for relieving the farmers, must be covered by federal grants, and by the profits of the principal department. The debt represented by the sum paid off suspended only for the time that the land in question is under the protection respecting homestead.

As soon as the debtor or his legal successor cancels the entry of the homestead in the register, the land will again be burdened by the original mortgage to the full amount.

The bank would thus be protected from dishonest manoeuvres, the farmers would be helped in difficulties and many of their children would resume possession of land involved in debt, with confidence in the future.

It is evident, the Professor continues, that land could be thus redeemed by the bank only within the degree of the means placed at its disposal by the Confederation. At the cost of one million annually many farms could be assisted, and in 20 years debts to the amount of 55 million could be paid off. Supposing for each holding an average extinction of 5,500 francs of debt, it would be possible with the sum above mentioned to create in 20 years about 10,000 homesteads. Continuing this agrarian policy, we should attain to a system exactly similar to that of home colonisation in Prussia, and in time find a permanent solution of the agrarian question.

Thus speculation would gradually disappear and the future of the people be assured.

There is another function which ought to be discharged by this department; viz. that of furnishing *credit for improvements*, and thus supplying deficiencies in the work hitherto done by the Confederation by means of grants. The new Civil Code, by granting the right of preference to mortgage loans contracted for purposes of improvement, would considerably facilitate the accomplishment of the work.

The financial requirements of the bank might be supplied by the issue of land bonds and State guaranteed bonds.

These bonds would be the safest in the Swiss money market, and would therefore not be issued at so high a rate as those of other mortgage banks. The Confederation should provide the capital required for the establishment of this bank.

The Confederation has assigned the surplus of the public revenue to the sickness or accident insurance societies and it might also renounce a part or the whole of the interest of the money granted for the establishment of the bank, and assign it to the department of public utility.

* * *

Notwithstanding its importance to the agriculturists and to their powerful organisation, the Swiss Peasants' Union, the question of the institution of a Federal Mortgage Bank is still under consideration in the Department of Finance, which is collecting material for its Report.

Part IV: Miscellaneous

GERMANY.

HOME COLONISATION IN NORTHERN GERMANY.

PART II.

*FORMATION OF "RENTENGÜTER" THROUGH THE INTERVENTION
OF THE PRUSSIAN GENERAL COMMISSIONS (Continued).*

§ 4. NUMBER AND EXTENT OF THE "RENTENGÜTER" FOUNDED.

The effect of the law of July 7th., 1891 on *Rentengut*, especially during the first few years after it came into force, was the formation of a great number of Rentengüter. In Prussia, and almost exclusively, in the East of Prussia, from 1892 to 1896, about 6,188 were constituted on 67,293 hectares. More than half were under the General Commission of Bromberg in the jurisdiction of which were then included the provinces of East Prussia, West Prussia and Posen. Between 1892 and 1896 it constituted about 66 holdings on 43,191 hectares, many more than the Colonisation Commission constituted at the same time. These figures show the difficulties with which a great number of East German landed proprietors had at that time to contend, owing to the agricultural crisis. For many of these the dismemberment of their landed property was the only way escape from an embarrassing situation and they therefore hastened to avail themselves as soon as possible of the opportunity offered.

It was soon evident that the General Commissions in accepting proposals made to them for the formation of *Rentengüter* had often at the start, without due caution. For want of experience and because they had but little influence in the division of the land, they handed to the *Rentenbanken* many holdings constituted by proprietors speculators in land, which were soon seen to be destitute of the characteristics required for the well being of the colonists.

To prevent such mistakes, the General Commissions became exacting in regard to the economic conditions of the new holding, the regulation of their position in public law, and demanded the deposit of a large sum as security.

However, when the conditions were so burdensome, the landowners and still more the speculators, who were more especially subject to supervision of the General Commissions, found themselves obliged to discontinue the formation of *Rentengüter*. After the year 1897 there was in consequence a great diminution in the number of new holdings; in 1902 there were in all no more than 311 formed, on 3,645 ha. This diminution was however partly caused by the fact that in Prussia and Posen the General Commission was obliged almost to cease forming *Rentengüter* in order to avoid interfering with the Colonisation Commission.

From 1903 and more especially after 1905, the General Commissions worked with renewed activity to promote home colonisation. During nine years from 1903 to 1911 more than 100,000 hectares were formed into *Rentengüter*. During the last five years the area of these has increased by from 14,000 to 15,000 hectares per annum. The cause of this revival of colonisation is that the General Commissions now try to prevent the former evils, no longer by taking extreme precautions, but acting now in accordance with certain fundamental principles based upon experience. They also receive large support from the Colonisation societies which complete their work.

Provinces	Number of Holdings or Parties Utilised for the Formation of Renteigärtner	Area of Holdings Divided in hectares	Number of Renteigärtner Obtained				Value of the Renteigärtner —	Purchase Price of the Renteigärtner		
			Less than 1/2 hectare		Between 2 1/2 and 5 hectares	More than 25 hectares		In Single Payments —	In Instalments (Renteigärtner) —	Marks
			Less	Between 2 1/2 and 5 hectares	More than 25 hectares	Total		Marks		
East Prussia . . .	306	61,378	39,824	497	997	268	3,180	31,226,975	994,198	8,979,870
West Prussia . . .	280	72,532	39,253	153	531	1,170	1,114	291	3,289	870,153
Posen	366	38,357	17,937	894	270	521	152	2,355	18,483,642	56,573
Pomerania	287	109,851	70,583	268	222	697	2,217	494	3,898	79,807,222
Brandenburg	128	17,507	5,687	174	100	155	196	38	663	8,443,473
Silesia	168	30,537	9,790	380	502	415	165	56	1,518	24,593
Saxony	225	1,603	923	81	39	51	19	2	183	2,350,375
Hanover	707	7,147	3,725	333	65	130	149	16	673	5,911,083
Schleswig-Holstein	910	35,015	15,394	254	67	136	284	239	980	22,624,209
Westphalia	1,240	15,069	4,075	784	311	139	64	24	1,322	10,451,646
Hesse-Nassau	7	1,362	390	77	13	4	11	5	110	612,042
Rhenish Provinces	9	11	5	16	—	—	—	16	167,812	3,961
Total	4,933	390,369	207,496	3,911	2,537	4,415	5,739	1,585	18,187	217,959,384
										6,552,430
										47,224,163

(B) Per Year.

Year	Number of Holdings of Holdings Entitled or Partly Utilised for the Formation of Renteigärtner	Area in hectares	Number of Renteigärtner Obtained				Estimated Value of the Renteigärtner in Marks	Purchase Price of the Renteigärtner		
			Between Land 2% and 5 hectares		Between 5 and 25 hectares	More than 25 hectares		In Single Payments (Renteigärtner)		In Installments (Renteigärtner)
			Low Tax Rate	High Tax Rate	hectares	hectares		— Marks	— Marks	— Marks
1891-92	59	20,779	5,083	27	75	149	94	47	392	4,278,423
1893	176	38,606	13,296	206	339	520	107	108	1,110	10,610,021
1894	239	53,307	21,829	97	398	654	573	180	4,902	17,728,111
1895	131	28,446	12,908	80	276	416	360	105	1,237	10,747,382
1896	104	27,659	14,477	82	179	389	402	115	7,167	9,906,852
1897	93	15,581	9,990	35	172	337	300	71	915	7,060,469
1898	76	15,947	9,644	42	130	183	291	74	720	5,959,666
1899	54	18,507	8,046	27	95	175	302	52	651	4,757,388
1900	44	6,945	4,297	27	69	71	127	28	322	2,582,551
1901	49	7,075	4,714	42	67	124	151	38	422	3,775,433
1902	59	5,436	3,645	38	38	86	129	20	311	3,345,932
1903	67	8,609	5,400	40	49	103	144	57	393	3,924,608
1904	64	8,531	5,247	62	39	69	160	46	376	5,183,772
1905	103	13,644	9,778	94	61	125	325	59	664	11,324,697
1906	109	15,884	10,049	101	41	96	291	88	618	11,650,310
1907	173	22,521	13,417	255	94	153	320	92	914	14,843,824
1908	662	17,838	12,476	410	139	85	155	108	1,223	18,340,352
1909	880	22,787	17,166	204	160	155	397	115	1,554	24,590,013
1910	1,104	20,971	12,709	200	624	155	347	96	1,357	23,344,897

The total area of the *Rentengüter* formed by the General Commissions between 1891 and 1911 amounts as the table shows to 207,496 hectares, i.e., 2,733 hectares are intended for farm yards and gardens, 148,198 fields, 35,769 for meadows and pastures, 13,142 for woods and 7,664 roads, water and waste land. The whole is divided into 18,187 distinct holdings. According to the estimate of the General Commission, the value of the *Rentengüter* is 218 millions of marks, that is 1,054 marks per hectare.

At the time of purchase the buyers paid 32.8 millions of marks in money. The value of the "*Rothypotheken*" and the "*Restrenten*" amounts to 11,800,000 marks. All the rest of the purchase money was lent to the *Rentenbanken*, which then issued bonds (*Umbriebe*) for the nominal value of 146,500,000 marks. A loan of 10,000 marks for building purposes was also granted in the form of a loan. The total sum issued for the formation of *Rentengüter* thus amounts to 150,000 marks. In interest and sinking fund the farmers have to pay annually 6,513,537 marks. If to the amount in bonds we add the credits and grants made by the *Rentenbanken* and the State, it will appear that the Prussian Government has, up to the present, given about 100,000 marks for the formation of *Rentengüter*.

Of the 18,187 *Rentengüter* in existence at the close of 1911, 14,686 altogether newly constituted (*Newansiedlungen*). The remaining 3,501 small farms already existing, which, with the addition of more land and extension of farm buildings, with the aid of the credit given by *Rentenbanken*, have now become independent holdings. This mode of colonising where small farms are few may be as useful as the creation of new holdings, and offers besides the advantage of adapting itself to existing conditions.

As the tables show, little more than half the land used for the formation of *Rentengüter* is subdivided. This is partly because the General Commissions in making the division of land, leave a considerable extent of land, in order to facilitate the sale of the existing buildings, parks and trees. By the law of July 7th., 1891 these larger lots cannot be handed over to the *Rentenbanken*, because their proprietors have only the general management and they work them principally with the help of other persons. It often only some parts of a landed property are assigned for division, only in the case of the large holdings of East Germany, but often frequently in the provinces of Westphalia, Hanover and Schleswig-Holstein, where there are many peasant holdings much too large for one man, as a rule, to manage. It follows that part of the land is less intensively cultivated, because it is too far from the centre of the farm because of the want of labour. It is therefore desirable in the common interest, as well as in that of the individual proprietors, that the area of land should be reduced. This would enable even the younger sons to become landowners, while the older farms would be reinforced by working capital being attracted to the land.

The provinces where *Rentengüter* are most frequently formed, are Pomerania and East Prussia, except West Prussia and Posen, where the

Rentengüter formed by the General Commissions date to a very large extent from the early days of this colonisation work and where today nearly all the colonisation work is in the hands of the Colonisation Commission. In many other provinces, for instance Silesia, Saxony and Brandenburg, although much in need of colonisation, the law on *Rentengüter* has been comparatively seldom applied, but even here and in the Western provinces greater activity is now beginning to be shown. In Schleswig Holstein, where *Rentengüter* are already numerous, considering that here farms of average extent were the rule, only 110 *Rentengüter* occupying 4,190 hectares were formed between 1892 and 1906, whilst about 769 comprising 11,114 hectares were formed between 1907 and 1911.

The figures given by the General Commissions enable us only to a limited degree to trace the great differences among the various provinces with regard to the type of home colonisation realised in them. It is nevertheless possible to learn from the average area of the holdings utilised for the formation of *Rentengüter* and that of the lands actually subdivided, whether chiefly large estates have been dismembered and new rural communities formed, or whether rather peasant holdings have been subdivided or diminished in area and new smaller holdings founded here and there.

As regards the distribution of the parcels of land according to their area, it will be seen from the figures in the table that in the case of about one third of the total number of *Rentengüter* the area varies from 10 to 25 hectares. It is also probable that, as in the case of the holdings formed by the Colonisation Commission, most of the abovementioned parcels are from 10 to 15 hectares in area. The number of parcels of from 5 to 10 hectares is also very large. Many of these may be considered as autonomous rural farms, because, under favourable circumstances, they are sufficient for the maintenance of a peasant family, especially if there is associated with them some small auxiliary industry, an inn or a grocery store. The parcels of from 2 $\frac{1}{2}$ to 5 hectares are chiefly intended for country artisans; those under 2 $\frac{1}{2}$ generally for labourers. For some years past these last have been largely increasing in number. At the close of 1907 out of 12,495 *Rentengüter* only 1,288 were of an area of more than 2 $\frac{1}{2}$ hectares; of 5,692 *Rentengüter* formed later, about 2,623 were of still smaller size, and of these 1,890 were less than one hectare. Of these small parcels, 1,185 less than one hectare, and 54 between 1 and 2 $\frac{1}{2}$ hectares were formed, as appears from the Report of the General Commissions, for workmen not engaged in agriculture.

§ 5. THE FUTURE OF HOME COLONISATION IN PRUSSIA.

Notwithstanding the remarkable success already attending home colonisation in Prussia, it is still far from having reached its goal, that is the subdivision of land in such a way as to meet the general needs of the country. Statistics show a considerable diminution in the number of holdings of over 100 hectares since the beginning of 1882, and still more since 1895, in favour

of holdings of from 5 to 20 hectares. According to the census of the three years 1882, 1895 and 1907, the number of farms and the ground they cover were as follows:

Category	Number of Farms			Total Area in Hectares		
	1882	1895	1907	1882	1895	1907
Under $\frac{1}{2}$ hectare .						
From $\frac{1}{2}$ to 2 hec.	1,842,332	1,238,190	1,352,842	1,219,094	285,369	353,530
" 2 to 5 "	495,199	552,780	520,914	1,971,951	1,049,168	1,039,482
" 5 to 20 "	495,822	528,729	583,160	6,044,788	6,667,483	7,738,863
" 10 to 100 "	191,197	188,114	175,906	8,565,679	9,014,964	8,822,656
Above 100 hectares	20,646	20,390	19,117	8,779,788	9,331,621	8,391,936
Total . . .	3,040,196	3,308,126	3,400,144	26,581,300	28,479,730	28,512,874

Particularly important for our subject is the change that took place between 1895 and 1907 in the comparative position of the groups of farms of from 5 to 20 hectares and those of over 100 hectares. This change is still more clearly shown in the following table in which the relative data for each province are given :

Province	Farms of from 5 to 20 hectares				Farms of more than 100 hectares			
	Number		Area		Number		Area	
	1895	1907	1895	1907	1895	1907	1895	1907
East Prussia .	37,625	43,982	438,000	562,584	3,431	3,296	1,371,000	1,234,565
West Prussia .	27,774	35,910	365,000	508,640	2,329	2,012	993,000	790,910
Posen	41,125	51,065	488,000	656,721	2,605	2,305	1,430,000	1,175,364
Silesia	80,326	84,662	885,000	986,668	2,851	2,8,5	1,359,000	1,273,282
Pomerania .	31,424	38,203	382,000	487,672	2,793	2,678	1,544,000	1,415,073
Brandenburg .	45,014	48,239	655,000	721,672	2,110	1,994	1,263,000	1,158,734
Saxony	42,357	45,545	492,000	545,203	1,610	1,617	601,000	580,433
Schleswig-Holstein	22,997	25,004	285,000	333,721	1,091	922	277,000	261,326
Hanover	55,869	64,586	945,000	1,094,772	650	614	185,000	172,294
Westphalia	37,746	39,664	579,000	612,995	302	238	131,000	108,333
Hesse Nassau .	35,485	36,570	374,000	406,914	308	253	86,000	55,992
Rhine Province	67,527	66,403	745,000	786,180	303	307	91,000	64,066

The great increase in small and medium sized holdings as shown in the above table, is not entirely due to home colonisation conducted and encouraged by the State, but, in large part also to divisions made by private persons. We may see in the table at page 95 that, under the *Rentengüter* system, from 1890 to the close of 1911, a period longer by several years than that to which the 1907 statistics refer, only 10,154 new holdings of from 5 to 25 hectares were created : and of 20,876 new holdings with a total of 300,000 hectares created between 1886 and the end of 1912 by the Colonisation Commission for West Prussia and Posen only 14,261 were of from 5 to 20 hectares. So many subdivisions made by private individuals in the face of innumerable difficulties is a proof that State colonisation is in complete accord with the natural tendency of modern economics.

A still closer examination into existing conditions shows that the vigorous continuation of the work of home colonisation is, under present circumstances, necessary for Prussia and Germany. Whilst almost every other country is exerting itself to the utmost to strengthen and augment its agricultural resources by increasing and elevating its rural population, it can not be considered encouraging that in Eastern Germany there are vast territories almost totally in the hands of a few landed proprietors. According to the census returns of 1907, 38.4 % of the holdings formed in East Prussia, 36.8 % in West Prussia, 46 % in Posen, 37 % in Silesia, 53.2 % in Pomerania and 35.5 % in Brandenburg were over 100 hectares in area. In Pomerania the number of farms of over 500 hectares was only reduced between 1882 and 1907 from 840 to 708, and their area, which in 1882 amounted to 839,000 hectares, is still 692,000 hectares.

The existence of such large landed estates not only hinders the natural progress of the peasant class but, greatest evil of all, as stated in the introduction to this article (1), it is the principal cause of the diminished population of many territories, because the working classes, seeing no chance of moral or economic improvement, are driven to emigrate to the great cities and manufacturing districts. This is a serious danger for agricultural holdings, because the farmers have to engage an ever increasing number of strangers and are thus at the mercy of labourers who, from one day to another, for any reason whatever, may fail them.

Scientific researches also prove that small farms are nowadays more profitable than large, above all, small livestock improvement farms, the importance of which for the nutriment of the people is continually increasing. Quite recently a book on this subject was published by Drs. E. Keup and R. Müller: *Die volkswirtschaftliche Bedeutung von Gross- und Kleinbesitz in der Landwirtschaft. Untersuchungen über den Wert der inneren Kolonisation im Osten der preussischen Monarchie.* (The Economic Importance of Large and Small Agricultural Holdings. Researches into the Importance of Home Colonisation in the Eastern Part of the Prus-

(1) See the number of this *Bulletin*, for December, 1912, page 163.

ian Monarchy). The book is especially worthy of notice because the authors have made comparisons between a large number of large holdings and peasant properties and have come to the conclusions that on the peasant holdings better use is made of the land and that, notwithstanding the greater number of persons living upon them, there is a greater excess of produce to supply the needs of the cities.

Consequently, it is very natural that the difficulties of the subject of the food supply of cities of late years has led many persons in authority to turn their attention to home colonisation. Their efforts to forward the work of colonisation are the more justified as the flourishing condition of the *Rentengüter* prove the excellence of the institution. For instance, in East Prussia during the not very favourable year 1911 it was only to 28 holders of *Rentengüter* that a delay in the payment of their dues (*Renten*) had to be allowed. It was a matter of 6,465 marks or 0.76 % of the total amount due for all the *Rentengüter* of the provinces. In the same year and the same province, only four compulsory sales of *Rentengüter* took place out of a total of 2,200 in round numbers.

That there is no intention of leaving the work incomplete is shown by two recently enacted laws, one (1) of which we have already discussed. Considering the activity already displayed by the Colonisation Societies of Public Utility, it may be presumed that the amount of 10 million which this law adds to the original State grant will greatly tend to the extension of home colonisation. The favourable reception of the proposal for this law when under discussion in Parliament makes it almost certain that further help will not be withheld.

By the other law (2), a sum of 230,000,000 marks was granted to the Colonisation Commission for Prussia and Posen, its funds being nearly exhausted. Of this sum, 75,000,000 marks are assigned for the work of Colonisation properly so called; 100,000,000 for conversion of the mortgages on peasant holdings; 30,000,000 for conversion of those on large estates, and the remaining 25,000,000 for the acquisition of land and forests on behalf of the State. The total of the sums granted to the Colonisation Commission since 1886 amounts now to 550,000,000 marks for colonisation by means of peasant holdings, 80,000,000 for dismantling large estates, 175,000,000 for dismantling peasant holdings and 150,000,000 for the purchase of State land and forests. It is probable that no future grants will be required, for the Commission will find the dues (*Renten*) the colonists installed will pay sufficient for carrying on the work.

A great impulse might be given to home colonisation by the State ceding certain territories to the Colonisation Societies of Public Utility and to this

(1) Law for granting State Aid for Agriculture and Home Colonisation (*Gesetz betr. die Bereitstellung von Staatsmitteln zur Förderung der Landeskultur und der inneren Kolonisation*) of May 28th., 1913.

(2) Law for Strengthening the German Element in the provinces of West Prussia and Posen (*Gesetz betr. Massnahmen zur Stärkung des Deutschtums in den Provinzen Westpreussen und Posen*) of May 28th., 1913.

course the Government seems indeed inclined. In the eastern provinces the State has land amounting to 389,028 hectares, in the western to 52,691 hectares. During the last ten years the Government has allotted for division 25,444 hectares of this land and it has the intention of granting more extensive areas in the future in conformity with the very often expressed wishes of the circles interested. Last year already more land was ceded; 15 areas amounting in all to 5,475 hectares were obtained and at the end of the year the royal approval had been given to the cession of nine more areas amounting to 4,300 hectares. An attempt is being made for the preparation of State lands for colonisation even during the period for which they are granted on lease, by the erection of suitable houses and other suitable measures.

All these arrangements will probably suffice to overcome obstacles and secure a satisfactory result. Some defects in the present organisation, such as the loss of time necessitated by the working of the General Commissions and the insufficient credit granted by the *Rentenbanken*, will very probably be eliminated by means of administrative measures.

The two chief obstacles most difficult to overcome are the low price of the bonds (*Rentenbriefe*) and the increase in the price of land, both of them making home colonisation more costly. The low quotation of the *Rentenbriefe* of the 3 $\frac{1}{2}$ % type, causing the amount recoverable at the termination of a colonisation undertaking to be about a tenth of the value of the bonds issued by the *Rentenbanken*, is a consequence of the general conditions of the money market and there seems to be no other remedy than to issue bonds at 4 % which, in their turn, impose a heavier burden on the colonists.

The increase in the price of land is partly explained by the increase of agricultural produce but it is also due to an abnormal condition of the land market, to which home colonisation has contributed. Gramberg, General Manager of the East Prussia Colonisation Society, complained bitterly last year at the Land Reform Congress in Posen, that in his province it had become very difficult to purchase land for colonisation at moderate prices, enabling the new proprietors to settle there with advantage, because such attempts were frustrated by unlimited speculation in land. Persons bought land without having the funds to pay for it, only to make profit by selling it again at the first opportunity; unprincipled middlemen persuaded landowners to part with their lands, and other professional subdividers of land have sometimes unscrupulously dismembered holdings with an utter disregard for economics, and the consequence has been a continual increase in the price of land. Even the holders of *Rentengüter* often allow themselves to be persuaded to sell their land, as the Colonisation Society of East Prussia complained in its Report for 1911-12. And in other provinces, where there has been much colonisation, the same thing, it is to be regretted, manifests itself, though in a less degree. The speculation in *Rentengüter* may to some extent be checked by forfeiture of the *Resthypotheken*. A bill has been for some time in prepara-

tion (*Parzellierungsgesetz*) against the socially injurious action of those who divide land solely for gain, which is called "*Wilde Parzellierung*".

The formation of holdings for workmen is another difficult but extremely urgently needed work in connection with home colonisation. Only in the last few years has this work made greater progress, but the total results are still very small. The 3,343 holdings formed between 1907 and 1912 by the General Commissions, partly intended for factory workmen, and the 2,210 holdings of less than two hectares made by the Colonisation Commission in West Prussia and Posen since 1886 (in round numbers 1,720 since 1900) form but a slight barrier against the desertion of the country, and their importance is still less when we consider the hundreds of thousands of foreign labourers required every year by German agriculture for field work or harvesting. Yet the good accomplished during the last few years, and more especially the active efforts of the small colonisation societies, give hope that even in this direction greater progress will be made in the future. It is especially to be hoped that the districts and small colonisation societies, which ought to become more and more numerous, will zealously devote themselves to the work. It is also to be desired that the employers of labour should in greater numbers join in the work, and it might be expedient that under certain conditions direct Government aid should be given them, as, at present, on account of the anxiety to ensure the independence of the labourers, such aid is granted only through the medium of neutral organizations.

ARGENTINA.

SOME INDICATIONS OF THE ECONOMIC AND AGRICULTURAL PROGRESS OF ARGENTINA.

OFFICIAL SOURCES:

- CENSO AGROPECUARIO NACIONAL (*National Agricultural and Livestock Census*). 3 vols. Buenos Aires. 1909.
- ANUARIO DE LA DIRECCIÓN GENERAL DE ESTADÍSTICA (*Yearbook of the General Management of Statistics*).
- ESTADÍSTICAS AGRÍCOLAS 1908-1912. (*Agricultural Statistics, 1908-1912*). General Management of Statistics and Rural Economics.
- LOPEZ MAÑAN (Julio) : El actual problema agrario. Buenos-Aires, 1912 (*The Present Agricultural Problem*). Publication of the General Management of Agriculture and Agricultural Defence.
- LAHITTE (Emilio) : Crédito Agrícola. La cooperación rural. Buenos-Aires, 1912. (*Agricultural Credit, Rural Co-operation*). Publication of the Management of Statistics and Rural Economics.
- LAHITTE (Emilio) : Région Norte, Buenos-Aires, 1911. (*Region of the North*). Publication of the Management of Statistics and Rural Economics.
- BULLETINS OF THE DEPARTMENT OF AGRICULTURE.
- LA SITUACIÓN AGRÍCOLA. SOCIEDADES COOPERATIVAS. (*The Agricultural Situation. Cooperative Societies*). Publication of the Management of Statistics and Rural Economics.
- EL COMERCIO INTERNACIONAL ARGENTINO. Buenos Ayres. 1912. (*Argentine International Trade*). Publication of the General Management of Trade and Industry.
- MEMORIA DE LA DIRECCIÓN GENERAL DE GANADERÍA 1910-II. Buenos Aires. (*Report of the General Management of Livestock Improvement*).
- EZCURRA (Pedro) : Exigencias Nacionales. Buenos-Aires. (*National Requirements*). Argentine Meteorological Office, 1910.

OTHER SOURCES:

- MARTINEZ (Albert) and LEWANDONSKI (Maurice) : L'Argentine au XX^e Siècle (*Argentina in the XXth. Century*). 4th. Edition. Paris, Colin. 1912.
- WALLE (Paul) : L'Argentine telle qu'elle est (*Argentina as it is*). Paris. Guilmoto.
- GIROLA (C) : L'Argentine Agrícola (*Agricultural Argentina*). 2nd. Edition. Turin. Tip. Elvetica, 1912.
- DOLERIS (J. A.) : Le Nil Argentin (*The Argentine Nile*). Paris, Royer, 1912.
- RODRIGUEZ (Luis D.) : La Argentina en 1912. (*Argentina in 1912*). Compagnie Sud-américaine des billets de banque. Buenos Aires, 1912.
- ANALES DE LA SOCIEDAD RURAL ARGENTINA. Buenos Aires.

A GACETA RURAL. Buenos Aires.

A NACION. Buenos Aires.

BULLETINS OF AGRICULTURAL STATISTICS OF THE INTERNATIONAL INSTITUTE OF AGRICULTURE,
Rome.

BULLETINS OF THE PANAMERICAN UNION. Washington.

"The revenue is increasing continually and there is no waste; foreign trade has increased to a degree hitherto unknown in our economic history; the current of immigration is more considerable than in previous years; the produce of the soil is being utilised for manufactures; cultivation is extending." In these words the President of the Argentine Republic summed up the economic progress of that country in the last Session of Congress in May 1913.

Indeed a consultation of the official statistics will convince us of the considerable progress Argentina has made in recent years. For, if it liberated itself from the Spanish yoke a century ago, it had to pass through a period of wars and internal agitations and overcome serious financial difficulties before it could consolidate its political and administrative position and enter on the tranquil period of economic activity which only commenced some twenty years ago.

In this short period we have seen Argentine agriculture and livestock improvement, the principal sources of the country's wealth, progressing in an unexpected degree, its railways, ports and trade developing, its inland settlements and towns multiplying.

The cultivated area, which in 1895 was hardly 5,000,000 hectares is now 23,000,000. The wheat crop which was very little more than a million tons is now more than five million, the maize crop has increased from two million to five million : livestock improvement, through the selection of the stock, and the frozen meat industry has made enormous progress; the total export, facilitated by a network of railways of about 32,000 kms. (there were hardly 14,000 kms. in 1895), has increased from 117,000,000 gold pesos (1) to 480,000,000 in 1912. And if the population has not increased in the proportion desired (the density is less than 3 per sq. km.), it has, however, doubled itself, and risen from 4 to 8 millions.

These few figures which we shall complete in the body of our article, show very eloquently the incentive given in recent years to the utilisation of the enormous natural resources of this privileged country.

§ I. A GLANCE AT THE NATURAL AND AGRICULTURAL RESOURCES OF THE COUNTRY.

In glancing at the map we see that Argentina occupies one of the most favourable positions in the world. Situated at the Southern extremity of America, in the South temperate zone, between the Atlantic Ocean and the Eastern slope of the Andes, the greater part of the country is healthy and

(1) The value of a gold peso is 5fr.; that of a *peso papel* (national money) is 2.20 frs.

Europeans easily get acclimatised and it is suited to the most varied crops as well as to livestock improvement.

In view of its large area (2,952,551 sq. kms.) and its elongated form, permitting of its extension over 33 degrees of latitudes, the climate varies greatly, being semi-tropical in certain regions of the north, semi-polar in the extreme south of Patagonia, temperate along the coast, where there is, on an average, a temperature of 19 degrees, and where are found the most fertile and most populous plains, the provinces of Buenos Aires, Cordoba, Santa Fe, Entre Ríos, etc.

The climate is generally characterized by abrupt changes of temperature, especially in Spring, and by droughts, which, together, with the periodical plague of locusts, are the severest trials Argentine agriculture has to support.

Rains are most frequent and regular in the east (from 600 to 1,000 millimetres), most abundant in the north-east. In the west they are less frequent and are irregular (from 200 to 600 millimetres) and become very rare in the north west. South of the 40th. degree of latitude, there is everywhere a deficiency of rain except in the region of the Andes. Winds prevail throughout the land, especially in the South and Centre; the north and south winds are the commonest, the former warm and suffocating, heralding atmospheric changes, are followed by the latter, cool and laden with oxygen. To this latter group belongs the famous *pampero* which comes from the pampas, and is violent but healthy.

A large part of the country is very fertile. The vast *pampeano* region occupying the greater part of the centre and the north, and characterised by deep deposits of *loess*, a sandy clay of fine consistency, is admirably adapted to the cultivation of cereals, fodder etc.

The geographical position of Argentina, with its alternation of seasons and consequently of crops contrasting with that in the northern hemisphere largely favours trade in agricultural produce, especially in wheat and fruit with the large consuming countries of the other hemisphere.

Its 2,600 kms. of coast, along the Atlantic, from the magnificent estuar of the Rio de la Plata to the extreme point of C. Virgins, offer a series of bays and harbours for the establishment of ports. The large rivers of the North the Paraná and the Uruguay, are two immense arteries serving for traffic in an extensive and very fertile region; the large plains, the boundless pampa stretching from the Andes and sloping gently eastward, to the Ocean or broken by rare *sierras*, lend themselves easily to the building of railways for transport of the agricultural and livestock produce to the maritime centres.

The snow capped mountains of the Cordilleras, extending from North to South for 5,000 kms., contain a great reserve supply of water for the numerous rivers, torrents and streams. Some of these water courses, after fertilising the valleys of the Andes, are lost in the plains or form lakes and lagoons, while a few reach the Ocean. They serve for irrigation works by means of which life may be given to the immense arid regions of the centre and the south and sterile moors converted into vineyards and orchards, as at

hand of man has succeeded in doing at Mendoza, or the stony districts of the Rio Negro into luxuriant meadows of lucern.

The chain of the Andes, the gigantic backbone of the country, is a real benefit accorded to it by nature. It contains great mineral and forest wealth, enormous supplies of water, and fertile valleys suited for the most various kinds of cultivation and for livestock improvement.

Owing to the different latitudes over which Argentina extends and the configuration of its soil, it is suited to the cultivation of the most various kinds of crops, from sugar cane, cotton, bananas and *mate* to cereals, flax, vines and olives.

* * *

From the agricultural point of view Argentina is divided into four regions: the *sub-tropical* region in the North; the region of *vines*, in the west; that of *cereals* in the Centre and the *Patagonian* region in the South.

(1) *Sub-tropical Region.* — This covers about 88,000,000 hectares, about 1,000,000 of which are cultivated, and includes the provinces of Corrientes, Santiago del Estero, Catamarca, Tucuman, Salta, Jujuy and the national territories of Misiones, Formosa, Chaco and Ande. It is largely covered with natural forests, some still virgin, others in course of being exploited, where the *quebracho*, cedar, *palo santo* and other species are found in large quantities, some producing dyes, others wood for building and cabinet making. The forest produce therefore forms the principal revenue and may be calculated at 75,000,000 frs. Among the plants cultivated, the most important is the sugar cane, of which there are numerous plantations, producing annually 160,000 tons of sugar. Other plants cultivated are coffee, *mate*, barley, wheat, olives, vines, bananas, rice, hemp, hops, tobacco, lucern, and all kinds of vegetables and fruit. The livestock improvement farms contain 6,900,000 head of horned cattle, 1,530,000 horses, 5,200,000 sheep, 1,552,000 goats, 186,000 pigs, of a total value in all of about 400,500,000 frs.

This region, still little exploited, on account of its remoteness, and the insufficient means of communication, has before it a magnificent future, when it is subjected to scientific industrial exploitation. It comprises a part of the Andes belt, (Ande, Tucuman, Jujuy, Salta, Catamarca), a part of the pampas region, that of the dry plains (Chaco, Formosa, Santiago del Estero) and, finally, a part of the very fertile region called the Argentine Mesopotamia, between the Paraná and the Uruguay (Corrientes Misiones).

The province of *Tucuman* may be considered as typical of the first region. It is called the "American Eden" and is the smallest (27,000 sq. km.) but the most populous of the provinces (325,851 inhabitants), and is counted one of the richest and most beautiful on account of its varying landscape.

"Mountain and plain, snow and burning sun, torrents, now impetuous, now dry, limpid springs and muddy water, luxuriant tropical vegetation on

the plains and on the slopes, eternal snows on the inaccessible summits." — That is how Waller describes its appearance in his valuable book "Argentina as it is."

Forests abound in the land and cover more than 5,000 sq. kms.

The basin of the Rio Salí, with which is connected an excellent irrigation system, has large plantations of sugar cane (80,000 hectares) and there are numerous refineries producing an average of 140,000 tons of sugar, the larger part of the production of Argentina. There flourish also rice, tobacco, bananas, citrus fruits, as well as every other kind of fruit and vegetable, and the farms have a great future before them when the important hydraulic works of Rio Lules and the colossal dyke of Cadillal, for which the Government has entered an amount of 4 million pesos on the Estimates provide water for thousands of arid hectares and powerful motor force for manufacture and transport.

Chaco may be mentioned as the typical region of the sub-tropical plain with an area of 136,635 sq. km., in large part unexplored, it has only 37,571 inhabitants, amongst whom are many Indians, some subject to the Government and others still wild. Two thirds of the region is unbroken forest lakes, lagoons (*esteros*) and prairies. Its wealth up to the present has been derived from the enormous reserves of *quebracho*, a tree of large size producing a very hard wood, rich in tannin (from 16 to 26 %); this wood is exported and also employed for railway sleepers, for the posts required in fencing the *estancias*, for boats, and in hydraulic works etc.

It is largely exported, chiefly to Germany, the United States, Great Britain etc. In 1911, Argentina exported 438,216 tons of *quebracho* trunks 68,431 tons of tannin extract and 35,793 railway sleepers.

Various national and foreign societies derive great profit from the exploitation of these abundant forests, either extracting the tannin in special establishments or preparing sleepers and posts, the natural market for which are Rosario and Buenos Aires.

Thanks to the increased means of communication and to the River Bermejo being recently rendered navigable, Chaco is now able to cultivate industrial plants, especially sugarcane, tobacco, cotton, the castor oil plant and ground nuts: the produce of these oleaginous plants, treated in the local factories, form with *quebracho* and sugar the chief article of export. Large hopes are now based on the cultivation of cotton, which gives excellent results and has developed considerably in the colonies of Resistencia and Barraqueros; the same may be said with regard to coffee, tobacco, and fruit of every kind.

The territory of *Misiones* belongs as we have seen, to the interfluvis sub-tropical region; it is bounded on the west by the Paraná, is 29,82 sq. kms. in area and has 45,171 inhabitants. After the Central Pampa, it is the one of the 10 national territories that has had the most rapid and prosperous development. The climate is warm and moist, the rains abundant, the soil undulating and to a large extent covered with forest, especially in the North. In the South are rich pasture lands and cultivated farms of which several colonies are installed.

The colonisation commenced by the Jesuits in the seventeenth century has been boldly resumed by free colonists. The large forests (1,070 square leagues) (1) of the region, of which only a very small part has been exploited (200 sq. leagues), are owned by a few proprietors possessing enormous areas. They consist of numerous valuable species (timbo, eucopai, cedars, black laurel, palo santo etc.) yielding wood for building purposes and cabinet making, as well as resins, gum etc.

Among the forestry industries the cultivation of *yerba mate* is of great importance. The *mate* is a bush the leaves of which serve for the preparation of a drink, which is very highly appreciated by the people of Argentina who generally take it as tea : it is found in the virgin forests covering areas of greater or less extent.

It is calculated the *yerbales* belonging to the Government or private persons annually produce about 1,500,000 kgs. of *mate* (2), which, however, is far from sufficing for the consumption, so that more than 40,000 tons are imported from Brazil and Paraguay, valued at 20,000,000 frs. By the unrestricted exploitation of this plant, formerly cultivated by the Jesuits, the natural supply is now menaced with destruction and the Government has had to take severe measures to prevent its disappearance. On the other hand, enterprising colonists have resumed the cultivation on scientific principles and it is giving very large returns.

For some time also cotton, ground nuts and the castor oil plant have been cultivated, a large future is assured for which as well as for all the tropical plants in the territory, when there is a larger supply of capital and labour in the district. The undulating soil lends itself, besides, to intensive cultivation and the rich valleys serve for livestock improvement and dairying.

Although in this rapid review it is not possible to enter into details, we cannot, however, pass over in silence the hydraulic wealth of the territory, the gigantic falls of the Iguazu, amongst the largest in the world and far more powerful than those of Niagara. This river, when approaching its junction with the Upper Paraná, has a breadth of more than 4,000 metres and falls in numerous cascades from a height of 68 metres.

(2) *Region of Vines*. — This is also called the western region. It includes the provinces of S. Juan, Mendoza, S. Luis, la Rioja and a part of Catamarca. It is renowned for its vines, which cover more than 100,000 hectares and yield more than 3,500,000 hectolitres. The province of Mendoza is the most important ; next comes S. Juan, distinguished for its large export of table grapes. The various watercourses that descend the Andes have allowed of the initiation of an extensive system of irrigation, which renders possible not only the cultivation of vines, but also that of olives, cereals, lucern and fruit trees. The livestock of the region consist of 330,000

(1) A square league = 2,500 hectares.

(2) Each plant can produce on an average from 25 to 30 kgs. of leaves, sold at the ports at 3 pesos per 12 kgs.

head of horned cattle, 160,000 horses, and 290,000 sheep, valued in all at 31,000,000 frs.

The province of *Mendoza* is typical of the region. Mountainous in the west, along the chain of the Cordilleras, it extends to the North and East in a broad, slightly undulating plain, for two thirds of the entire area (146,378 sq. kms.).

The traveller by the Transandine Railway is struck by the majesty of the landscape. The green expanse of plantations losing itself on the horizon has for its background gigantic mountains dominated by the peaks of Aconcagua, the giant of the Andes (7,000 m.), whose snows for ever supply innumerable water courses to fertilise the plains below.

The *Llanura* resembles the pampa in character. It is sandy, covered with layers of saltpetre, arid and apparently sterile. Irrigation has given life to the whole of this region, which is now one of the richest in Argentina. A close network of canals, extending for a length of more than two thousand kms., fertilises more than half a million hectares where vines, lucern, cereals and fruit trees flourish. It is calculated that the important hydraulic works now being carried out in connection with the Rivers Diamante and Atuel will increase the irrigated surface to a million hectares.

The fertility of this land, which was formerly only moor, has especially attracted Italian labour and capital to the province, where in a few years the value of the land has increased in an extraordinary degree. Farms which cost from 10 to 20 pesos are now sold at from 250 to 300 pesos. In seventeen years the value of the land rose from 50,000,000 to 286,000,000 pesos.

The cultivation of vines has been enormously extended in the course of the last twenty years. In 1895 there were only 13,459 hectares of vineyards, in 1911 there were 47,000. Three million hectolitres of wine are produced on 1,500 farms. *Mendoza* has thus come to be the principal wine producing district of the Republic.

(3) *Grain Region*—This region includes the whole Centre from the vine region to the coast, the provinces of *Cordoba*, *Santa Fé*, *Entre Ríos*, *Buenos Aires* and the Central Pampa Territory, that is an area of 801,696 sq. kms. with a population of about 4,000,000 inhabitants or half that of Argentina.

It consists of an immense plain sloping gently towards the Atlantic Ocean, interrupted by slight undulations and rare sierras, without either trees or stones. Its temperate climate, the fertility of the soil, the extent of the coast, the magnificent water system of the rivers *la Plata*, *Paraná* and *Uruguay* have made this region the richest and most populous of Argentina. This is the region of large grain production and livestock improvement; its area is 11,000,000 cultivated hectares, the half cultivated with wheat, and it supports 20,000,000 head of horned cattle and 45,000,000 sheep.

The marvellous agricultural progress of this region is largely due to the railways which have opened and are daily opening new areas to cultivation, as well as to the introduction of lucern (*alfalfa*), that precious cattle food growing admirably in this soil. These two causes have led to a

great increase in the value of land. Unrestricted speculation, encouraged by the system of auction sales, has also increased the tendency, which unhappily has degenerated into that of traffic in land, which is one of the most alarming phenomena of Argentine agricultural economy.

Buenos Ayres is, as we know the leading province. It is the historical, political, social and economic centre of the country, whither the current of emigration has always been attracted. Its area is 305,304 sq. km. and it has 3,377,648 inhabitants, 1,360,406 in the federal capital. Together with the large ports of Buenos Ayres and Bahia Blanca, with its waterways, bounded, as it is except on the West and North, by rivers, it possesses the most complete system of railways : 12,000 kms. of lines working and more than 4,000 in construction.

Its chief resources are : the cultivation of cereals and flax, and livestock improvement. The soil, fertile in almost the whole area, watered by more than 400 streams, with many lakes and lagoons, and rendered more productive by means of canals, is cultivated over an area of 9,000,000 hectares, 2,500,000 of which are under wheat, 2,000,000 under maize and 1,900,000 under lucern.

This cattle food, with its large yield, has contributed here, as throughout the country, to the development of livestock improvement and the rise in value of the land. On the immense *estancias* which are the pride of the *pueblos* (some covering 100,000 or 150,000 hectares) half the sheep of the whole Republic, 34,604,000 head, are grazed, together with a third part of the horned cattle and horses, 10,355,000 and 2,572,000 head respectively. In this province we find the best breeds, the principal studs, the chief establishments for freezing meat and the most important markets for the sale of livestock.

After Buenos Ayres, first in importance from the economic and demographic point of view is the province of *Santa Fé* (132,382 sq. kms., 915,132 inhabitants). In the north it is wooded, in the centre and the south rich farms cover an area of about 4,000,000 hectares, that it to say, almost a fourth of the entire area. Of these 4,000,000, 1,205,000 are cultivated with wheat, 905,000 with maize, 760,000 with lucern, 650,000 with flax, and the rest with barley, rice, the castor oil plant, ground nuts, tobacco, vegetables and fruit. There is a large supply of livestock, 3,000,000 head of horned cattle, 1,000,000 sheep and 950,000 horses.

The province of *Santa Fé* is the classic land of colonisation ; the first settlement group, "Esperanza", was founded in 1856, on the initiative of 200 Swiss families. In 1895, the colonies numbered 363. There are now 650. This great progress is due not merely to the fertility of the soil, but also to railway extension and the river ports of Rosario, *Santa Fé* etc., as well as to a wise colonial policy which favours it by fiscal exemption and free carriage. Most of the colonists cultivate farms of comparatively limited area, between 60 and 130 hectares, worked chiefly as tenancies. The existence of greedy middlemen, and the frequently unfortunate conditions of the contracts have occasioned a certain dissatisfaction among

the colonists, which has recently found its expression in serious agrarian agitation.

Here also the value of the soil has considerably increased and it may be estimated at from 180 to 200 pesos the hectare. Although the land is more split up, than before, there are still latifundia the proprietors will not subdivide and bring under cultivation, preferring to wait till speculation produces the usual rise in price.

The nature of this rapid review prevents our speaking of the other provinces of this fertile region, *Cordoba*, famous for its extensive maize farms and its rich colonies and *Entre Ríos*, the fertile interfluvial belt, called the *garden of the coast*, celebrated for its fat pastures and for its lucern fields feeding about 3,000,000 head of horned cattle and 8,000,000 sheep, noted for its *saladeros*, its frozen meat establishments and the Liebig establishment, where annually from 140,000 to 150,000 head of horned cattle are slaughtered.

We shall rather give a few details in connection with the *Central Pampa* Territory, as that affording the most typical example of the rapid transformation of an Argentine district in an agricultural sense. This territory, which was, up to 1884, overrun by Indian hordes, dry and apparently sterile, and therefore held of no account, this desolate plain traversed by half wild herds of cattle, is now a sea of grain and artificial meadows where animal of the best European stock graze. The principal causes of this rapid progress have been the fertility of the rich soil of vegetable mould, the vicinity of the large centre of attraction, the Province of Buenos Ayres, and the railways that have penetrated inland more than 1,200 kms. In 1895, the cultivated area was hardly 8,751 hectares; in 1911, 1,900,000 hectares were under cereals and *alfalfa*.

The livestock here consists of 6,000,000 sheep; 470,000 head of horned cattle, 290,000 horses and 120,000 goats. Every year 50,000 head of fattened horned cattle and 150,000 sheep are brought to the markets of Buenos Ayres and Bahía Blanca. Pampa wool, which is much in request, is largely exported: in 1911 to the amount of 19,000 tons.

In an area of 145,907 kms. there are as yet only 92,000 inhabitants, distributed in a few centres and on 2,300 large farms, some of them real villages. Large latifundia prevail, large *estancia* covering thousands of hectares.

The report of the fertility of the soil and the influence of the railways soon raised the value of the land; speculation has done the rest. Thus, while 10 or 15 years ago a square league could be bought for 2,000 pesos, now it is worth as much as 50,000, 80,000 or 100,000 pesos. Speculators in land purchase immense areas in expectation of their rise in value and let them to large tenants who, in their turn, sublet to small colonists: the latter most frequently find themselves at the mercy of the sub-letter, from whom they have to obtain advances in money, their supplies and implements and who is at the same time the purchaser of their produce. A bad harvest may often be the ruin of a farmer who must go to seek work elsewhere. These conditions, met with also in other provinces, are not such

to attach the colonists to the soil or inaugurate a reasonable system of agriculture, or to give birth to centres of population so necessary for the future of the country. Some time ago, however, some landholders began selling holdings to the colonists themselves.

(4.) *Patagonian Region.* — This includes the whole region south of the Río Colorado, which forms the southern boundary of the Central Pampa and the Province of Mendoza, that is to say the territories of Neuquén, Río Negro, Chubut, Santa Cruz, as well as the Eastern portion of Tierra del Fuego; altogether, 858,000 sq. kms. In the south the climate is severe, semi-polar in the extreme south, but temperate in the centre.

All this part is still very undeveloped. Roads are extremely rare, and the inhabitants, who are very few, are for the most part Indians. Its mineral wealth, its forests, the valleys of the Andes, the immense plains of the Río Negro and the Chubut, are waiting for railways and irrigation. The principal occupation, up to the present, is livestock improvement, especially sheep improvement, carried on above all by societies provided with British capital, possessing enormous areas of land.

It is calculated that the livestock consists of 807,000 head of horned cattle, 11,500,000 sheep and 490,000 horses.

Agriculture is up to the present very little developed ; it meets with obstacles also in the great droughts and the violent winds. It could, however, make some progress in the temperate region. In the valleys of the Andes, where forests and lakes abound, the cultivation of cereals, lucern, vegetables and fruit of every kind prospers.

In the *Río Negro* Territory, lately opened to farmers, thanks to the Bahía-Blanca-Neuquén railway, they are beginning with great advantage to cultivate cereals, lucern, vines, fruit and vegetables. This territory, which extends over 206,750 sq. kms., and has hardly 40,000 inhabitants, has been for some time attracting the attention of the Argentine people and inviting the initiative of the authorities. Outside the fertile mountainous region of the North West, and the region of the lake Nahuel-Huapi, there is an immense belt of alluvial land between the two large rivers, the Colorado and the Negro, which flow from the Andes to the Ocean. All this region may be made very fertile, when the course of the streams is regulated and a network of canals irrigate the immense plains now arid. Up to the present, attention has been principally directed to the valley of the *Río Negro*, the large Patagonian River, that has been called the Argentine Nile, on account of its periodical inundations. It is formed by the junction of the Limay and the Neuquén which unite at Confluencia. In its course, which is about 1,200 kms., there are numerous islands (317), some of them very fertile. The largest, Choel-Choel, is 65 kms. long and 12 kms. broad.

The Government has prepared a large programme for the regulation of the course of the *Río Negro*, to hinder the extensive overflow to which it is subject every ten years, and for the irrigation of a large area of land that might be made very fertile, and adapted to the cultivation of vines, lucern and fruit. The principal undertaking for the transformation of the region is the construction of an immense dyke, called the *Cuenca Vidal*, near the

confluence of the Nequen and Limay. There is there a deep oval depression, surrounded by hills, of an area of 200 sq. kms. and a depth of 40 metres, communicating with the Nequen by a gorge. It is intended to accumulate in this colossal reservoir, the capacity of which may be 2,000,000,000 cubic metres, the overflow of the Nequen, which causes the inundations. This great reserve of water will be utilised by means of a canal which will irrigate more than 100,000 hectares. The work, which will cost more than 4,000,000 pesos (20,000,000 frs.), was commenced in 1910. The work, under the direction of the Engineer Cipolletti, is being carried out for the Government by the Southern Railway Company.

Other canals will draw off water from the Rio Negro in its lower course.

The fertility of this valley and the great hydraulic and railway works in project and in course of execution, have also here, together with speculation, given rise to a considerable increase in the price of land that a few years ago had no value. This region, together with that of Pampa, affords a specially significant example of the rapid conversion of desolate districts into fertile agricultural land : irrigation and railways are the prime causes of these changes met with in the economic history of Argentina, explaining the increased agricultural production we remarked on in our opening paragraphs.

§ 2. CULTIVATED AREAS.

The most eloquent witness to the Agricultural development of Argentina is to be found in the progress of the cultivated areas. As we saw in the preceding section, enormous areas of virgin soil have been won for agriculture within the last twenty years, especially in the central region : gradually the railways traverse the desert territories, the plough breaks up the virgin soil of the moors and transforms them into fields of grain and lucen : the colonist erects his hut here or there and around the stations rise up centres of habitation : with the increase of cultivation and of population the price of land rises and the railways advance further.

This interdependence of events may be seen in the following table:

TABLE I. — *Progress of Railways, Cultivated Areas and Population (1872-1911).*

Years	Railways — (kms.)	Area Cultivated — (hectares)	Population
1872	864	580,008	2,231,049
1886	7,645	2,459,120	2,158,434
1895	14,462	4,892,004	3,954,911
1910	29,413	20,367,082	7,171,910
1911	31,174	21,838,689	7,467,878
1912	31,749	22,939,000	—

In the period 1886-1895 while the total length of railways was doubled, there was a corresponding increase in the area cultivated; from 1895 to 1912, in 17 years, the respective increases were, 120 % and 369 %; in forty years, from 1872 to 1912, the area cultivated and the length of railway increased respectively 3,855 and 3,575 %. Let us see now the increase in the various crops cultivated:

TABLE II. — *Distribution of Cultivated Areas*

Crops	1872	1888	1895	1911	Percentage of Crops in 1911
	hectares	hectares	hectares	hectares	
Wheat	73,096	815,438	2,049,683	6,897,000	31.51
Flax	34	?	387,324	1,630,820	7.45
Maize	130,430	801,588	1,244,184	3,422,000	15.64
Oats	—	—	38,624	1,031,000	4.71
Barley	1,713	?	54,374	67,703	0.31
Lucern	105,782	390,009	713,091	5,630,100	25.73
Tobacco	3,461	?	15,795	9,768	0.04
Sugarcane	2,453	21,062	61,273	93,430	0.43
Cotton	403	12	879	1,804	0.01
Ajues	3,650	25,634	33,459	100,497	0.46
Ground Nuts	2,388	?	13,475	13,360	0.06
Potatoes	2,361	?	21,084	108,020	0.50
Beans	3,745	?	20,801	26,625	0.12
Vegetables	—	?	23,559	46,350	0.21
Frees Generally	?	36,125	204,224	670,595	3.06
Other Crops	28,492	369,232	48,599	2,135,437	9.76

As we see from this table the largest area (about 52 %) is under grain; especially wheat (31.5 %) and maize (15.6 %); next come lucern (25.7 %) and flax (7.4 %). The cultivation of these crops has considerably increased: there has been a very large increase in the cultivation of cereals, lucern and flax in the last forty years.

As we know almost all these crops are cultivated in the grain region (1) (see § 1) consisting of the provinces of Buenos Ayres, Santa Fé, Córdoba, Entre Ríos and the Central Pampa Territory.

Let us see the increase in the areas under cereals, flax and lucern, the various provinces of this region and in the whole territory between 1895 and 1911:

(1) The areas under wheat, flax, oats and maize cover 15 % of the area of this region. The available area for wheat in the whole of Argentina is 50,000,000 hectares, that is more than eight times that now sown. The Republic may therefore be ranked among the world's granaries.

TABLE III.—Areas under Grain, Flax and Linseed.

We now give the increase per cent in these crops in the whole territory, between 1895 and 1911.

Wheat	236.5½
Maize	175.0
Oats	2,569.3
Flax	321.0
Lucern	689.6

As we see oats show the largest increase, then lucern, flax, wheat and maize. It is the central region that contributes most largely to this progress; the Pampa Territory, but recently brought under cultivation, shows very large increase, especially of wheat (226,116.2 %), lucern (8,453.1 %) and maize (3,154.9 %).

§ 3. AGRICULTURAL PRODUCTION.

The following table shows the increased production of cereals and flax in 1895-96 to 1912-13.

TABLE IV. — *Production of Cereals and Flax* (1895-1912).*

Working Years	Wheat	Flax	Maize	Oats
	Tons	Tons	Tons	Tons
1895-96	1,263,000	232,000	2,240,000	—
1896-97	2,034,438	289,954	2,510,692	25,000
1897-98	3,672,251	591,912	4,951,000	30,000
1898-99	3,974,000	595,000	703,000	685,000
1899-1900	4,523,000	572,440	7,515,000	1,004,000
1900-01	5,400,000	1,130,000	5,000,800	1,582,000

* These figures are reproduced from the "Annual Agricultural Statistical Report," except those for 1911-12 and 1912-13, which are reproduced from the "Bulletin of Agricultural Statistics" of the International Institute of Agriculture.

The largest increases are in oats, flax and wheat, which is natural, the areas under these crops have been considerably extended (See Table III).

Wheat holds the first place among the cereals. The production in 1910-11 was distributed as follows : (1)

(1) The official Statistics do not enable us to give more recent figures for these regions.

TABLE V. — *Production of Wheat (1910-11).*

Provinces and Territories	Area Cultivated	Production	Yield per Hectare
	(hectares)	(tons)	(kgs.)
Buenos-Ayres	2,216,638	1,670,000	753
Santa Fe	940,965	523,000	556
Cordoba	1,029,287	1,295,760	630
Entre-Rios	206,914	130,760	632
Central Pampa	390,159	295,000	756
Other Provinces and Territories	90,000	60,000	667
Total	5,873,913	3,974,520	675

The provinces that produce the largest quantities of grain are, as we see, those of Buenos-Aires and Cordoba, which, together, yield about $\frac{3}{4}$ th of the total amount.

The average yield of wheat (from 7 to 8 quintals) (1), as of the other cereals and flax, is not high and shows no tendency to increase. This is due to the eminently extensive system of agriculture that prevails in Argentina, and this, in its turn, is due to the land system and demographic conditions of the country, where enormous areas of land are obtained at a very small cost, and the deficiency of labourers. Extensive farming requires the smallest number of hands and the minimum of capital; favourable conditions of the climate and the suitability of the soil for the employment of machinery (2) permit of large areas of land being worked without a correspondingly large expenditure.

(1) In fertile districts and in favourable years up to 30 quintals per hectare have been obtained.

(2) The use of machinery, imported for the most part from the United States, is extending: the following table shows the increase in the importation of machine ploughs, reapers, sowers and threshers, between 1895 and 1911, which is another important indication of the agricultural progress of the country:

Importation of Agricultural Machinery.

Years	Ploughs	Reapers	Sowers	Threshers
1895	10,660	2,723	719	2
1900	26,627	6,094	1,388	2
1905	66,404	14,492	7,911	9
1910	99,556	18,513	31,472	8
1911	83,483	21,534	21,962	11

A family of colonists can cultivate alone from 150 to 200 hectares. The yield per unit of area obtained by such a system is certainly inferior to that which might be obtained by intensive farming, but the cost of the undertaking, given the conditions above mentioned, is greater under the extensive system.

Walle, in his valuable book recently published, brings forward an eloquent instance in this connection : a family in the North of North America cultivates 25 hectares intensively, with a yield of 1,650 kgs. per hectare, it may produce 41,250 kg. of wheat, which is worth 8,166 frs. The Argentine family, cultivating 150 hectares with a yield of 700 kgs., obtains 105,000 kgs., at 20,790 frs. The revenue of the farm is far superior in this latter case: this is the reason for the persistence of extensive cultivation in Argentina.

The cost of production of wheat varies, but it may be estimated, on average, according to Girola, at 4 frs. per quintal on the farm and from 9 to 10 frs. at the ports. A very large proportion of the wheat, as we know, is exported, especially to Great Britain, Belgium, Brazil, France, Holland and South Africa.

Maize is the cereal second in importance. Since 1895, the production has more than doubled itself. The yield is from 20 to 40 quintals the hectare (1). The cost of production varies with the fertility of the soil. In the most favoured localities it may be reckoned at 5 frs. on the spot. The home consumption being very small, most of the produce is exported, especially to Great Britain, Belgium, Germany, France, Italy etc.

Flax, which is the most widely cultivated oleaginous plant, is grown only for its seed. The stalks are left in the field or burned. For some time, however, studies have been carried on with a view to the utilisation of its great wealth which has been up to the present lost, for the manufacture of tow, paper etc. The average yield is 7 quintals the hectare, and, in fertile districts, 20 quintals. The cost of production is about 10 frs. the quintal.

Since 1895, the production of linseed has increased nearly four fold, in consequence of the rapid extension of its cultivation, which may be further extended to several million hectares.

Among the industrial plants, sugar cane is the most important. As we have seen (§ 1), it is principally cultivated in the sub-tropical region and especially in the province of Tucuman, where are the greater number of plantations and refineries.

The sugar cane had been long cultivated in this country, but the cultivation has only made large progress within the last ten years, in consequence of the high prices paid for sugar, which benefits largely by protection, and the foundation of numerous refineries. This has led to over production, and an intense crisis in the industry, which is now on the point of being mounted. In fertile districts the yield is from 20,000 to 30,000 kgs. per hectare. The cost price of a quintal of sugar cane is on an average 30 cm.; the selling price is 1 fr.

(1) In certain localities of the central region, a yield of 80 quintals has been obtained.

The amount of sugar produced, which was 130,000 tons in 1895, increased to 180,000 tons in 1911.

The following table shows the production of sugar, per province, the period 1908-1911:

TABLE VI.—*Production of Sugar.*

Province	Production of Sugar (Tons)			
	1908	1909	1910	1911
Tucumán	137,541	107,706	119,079	152,96
Jujuy	17,857	16,679	21,418	23,02
Salta	1,083	725	1,058	1,17
Santa-Fé	669	648	2,200	36
Corrientes	142	60	330	19
Chaco	4,965	1,367	3,771	1,90
Formosa	431	137	623	45
Total	161,688	127,322	148,500	180,09

Another plant largely cultivated in Argentina is the vine: especially we have seen, in the provinces of Mendoza and San Juan. To appreciate the rapid extension of its cultivation it will be enough to remember that in 1872 there were only 3,650 hectares of vineyard. In 1911 the area under vines was 100,500 hectares. The wine produced, estimated at 13,500,000 litres in 1889, amounted in 1911 to 388,000,000 litres (1), about 298,000,000 being supplied by the province of Mendoza alone.

It is well known that Argentine wines are of ordinary quality and keep badly. They are consumed in the country and almost suffice for the home market; a great future may be in store for them when improved methods of wine making are introduced and the cultivation of the vine is extended to other districts, especially to the Rio Negro, and it may be they will then be exported to some of the adjacent countries.

§ 4. LIVESTOCK IMPROVEMENT AND INDUSTRIES IN CONNECTION WITH IT

If, in the last twenty years, agricultural industry has made great progress, livestock improvement, the other great source of the wealth of Argentina, has not made less, above all as regards the quality of the livestock. The system has been radically transformed. A few years ago Argentinian

(1) The yield of grapes in 1911 was 59 %. The cost of production is on an average from 10 to 16 frs. the quintal, according to the soil. The price of sale varies from 20 to 25 frs. the hectolitre at the ports and from 30 to 40 frs. at Buenos Aires.

was the land of half wild herds, ranging at liberty in the solitudes of the *pampas*, without stalls and without care of any kind bestowed on them, and pursued by the *gauchos* with lassos. This state of things, if it still exists in the most remote territories, has almost completely disappeared in the principal district of livestock improvement, that is the central region. The modern *estancia* is provided with holdings and special equipment. The stock no longer live in common, abandoned to themselves, but are distributed over vast areas, enclosed with wire, and under the diligent supervision of a technical staff. The importation of good breeding stock and selection has considerably improved the breeds. The *criollos*, long-horned cattle, which were only bone and muscle, have given place to cattle crossed with good stock, or thorough bred Durham, Hereford, Polled-Angus etc. animals. The lank long legged sheep have been replaced by Merinos, Lincoln and Rambouillet stock. (1).

The chief cause of this progress is to be sought in the introduction of the frozen meat industry, which has rendered possible the exportation of meat on a large scale to European countries, above all to Great Britain. To meet the requirements of this, the quality of the livestock had to be improved, and great consideration had to be given to their suitability for fattening. The Argentine livestock improvers devoted all their attention to these two objects. They profited by the results obtained by modern livestock improvement and they rivalled each other in the purchase of good European breeding stock, especially from England, regardless of expense.

The results were soon seen. In the province of Buenos Aires, especially, many *estancias* have a stock of horned cattle and sheep the most progressive European livestock improvers might envy. Today, various livestock improvement establishments (*cabañas*) can provide excellent males for *estancias*, who wish to improve their stock.

The Argentine Rural Society has the merit of having powerfully contributed to this progress, by means of competitions and shows organized annually at Palermo (2), the large park at Buenos-Aires. The finest specimens of the livestock produce of the country are there united, and is no rare thing to see oxen weighing from 1,500 to 2,000 kgs.

It is calculated that 96,000,000 hectares are utilised for livestock improvement on large landed estates, the area of which varies from between 4 and 5 square leagues in the central provinces to between 20 and 50 square leagues in the Southern territories. The value of the livestock on these 96,000,000 hectares, according to the last census returns of 1908, 652,000,000 old piastres, and a third of this stock is found in the province of Buenos-Aires. The following table shows the amount of livestock in 1908, according to the last census returns, compared with what it was in 1888 and 1895.

(1) In 1901, 29 of Durham breed were imported; in 1906, 2,180. In 1900 1,869 of Lincoln red were imported; in 1905, 6,555.

(2) At the 1875 show there were 18 head of cattle; at that of 1910, 1,042. The total sales of the former (including horses etc.) realized 563,596 fr.; those at the latter, 2,313,367 frs.

TABLE VII. — *Livestock Statistics.*

Year (Census Returns)	Horned Cattle (x)	Horses	Sheep (t)	Pigs
1898	21,963,930	4,262,917	66,701,097	403,203
1895	21,701,526	4,445,859	74,379,562	652,766
1908	29,116,625	7,531,376	67,211,754	1,403,591

(x) According to the Agricultural Statistical Returns, on December 31st., 1910, there were 28,847,900 head of horned cattle and 73,012,340 sheep.

As we see, in 13 years, from 1895 to 1908, the horned cattle had increased by 7,415,099 head (25.47 %). The three provinces of Buenos-Aire, Santa Fé and Corrientes, which have the largest livestock improvement establishments, (1) alone show an increase of 5,086,417 head.

On the other hand, the sheep (2) have considerably decreased in number (by 9.64 %), which is only a proof of the agricultural progress of the country: *sheep disappear before agriculture*. In fact, the largest decrease is found in regions where there has been the greatest agricultural progress that is in the grain region and especially in the province of Buenos-Aire. Even Central Pampa, which a few years ago was supreme in the matter of sheep improvement, shows a considerable decrease in its stock, owing to the wonderful extension of agriculture. On the contrary, the Southern territories, which are eminently pastoral, have seen their stock of sheep increase. Southern Patagonia is destined to become one of the large centres of sheep production.

As above remarked, the progress in livestock improvement is not much in the quantity as in the quality. Let us take, for example, the Province of Buenos-Aires, which is the most important: whilst, in 1895, the horned cattle of *criolla* race represented 50 % of the total, in 1908 they were only 8.7 %, while the half breeds have increased from 49 % to 85 % and the thorough breeds from 0.6 % to 6 %. A considerable progress is also observed in the other classes of livestock, especially in the sheep. The following table shows the improvement obtained in the livestock in the province of Buenos Aires in the period 1895-1908.

(1) The province with the largest number of horned cattle is Buenos Aires (10,351,2 about $\frac{1}{3}$ rd, of the total number); then come Corrientes (4,275,895); Santa Fé (3,413,440); Río Negro (3,145,639); Córdoba (2,639,480). The Andes territory comes last with only 995 head.

(2) The largest number of sheep is also found in the Province of Buenos Aires (34,604,81 or about half the total number), in spite of a large decrease (18,000,000 between 1895 and 1908); then in Entre Ríos (7,005,409); Central Pampa (4,809,077); Río Negro (4,724,844).

TABLE VIII. — *Improvement of the Breeds in the Province of Buenos Aires.*

Livestock	Native Breed		Halfbred		Thoroughbred			
	1895		1908		1895			
	Actual Number	%						
Horned Cattle	3,888,358	50.3	8,644,418	57	3,803,580	49.2	8,806,978	85.1
Horses	1,359,177	80.6	1,391,470	55.4	373,672	18.7	1,096,510	45.5
Sheep	6,688,456	16.5	6,931,270	23.6	3,694,564,058	56.0	3,119,448	95.7
Pigs	194,946	54.3	253,112	35.6	105,545	42.3	194,392	61.1

livestock selection — writes Martinez in the introduction to the livestock Census — has led to a "fabulous increase of public wealth". While in 1895 the total value of the principal species of livestock (horned cattle, horses, mules, asses, sheep, goats, pigs) amounted to 378,926,803 gold pesos, in 1908 it was estimated at 651,764,187 gold pesos; in 13 years there was an increase of 273,000,000 gold pesos (72%). The value of the horned cattle increased from 222,842,465 to 413,021,767 gold pesos, an increase of 81%.

An eloquent witness to the increase of the livestock is given by the statistics of horned cattle slaughtered in the various shambles, frozen meat establishments and *saladeros* (1) of the Republic:

TABLE IX. — *Horned Cattle Slaughtered.*

Horned Cattle	1904	1911
	(Head)	(Head)
At the Liniers Shambles (Federal Capital)	488,043	740,267
At other Shambles	425,021	1,174,229
In Frozen Meat Establishments	307,828	1,268,431
In Saladeros	235,740	387,612
Total	1,436,632	3,570,539

The development of the frozen meat industry has in recent years been enormous: it has found a market in the large consuming countries beyond

(1) The *Saladeros* are establishments for drying and salting meat: before the introduction of refrigeration, this was the only industry in connection with livestock improvement. The place of the *saladeros*, called *taseyto*, is still largely exported to Brazil and Cuba.

the Ocean, and especially in Great Britain which had prohibited the portation of live cattle for fear of epidemic thrush. The Provinces of Buenos-Aires, Santa Fé, Entre Ríos and Corrientes contain the largest number of establishments for cold storage : these, managed by powerful companies supplied for the most part with British capital, are splendidly equipped in the most improved style. Among the seven companies mentioned in last Agricultural Statistical Return, let us note :

The *La Plata Cold Storage Company*, with a capital of 2,019,024 gold piastres, with head quarters at La Plata : in 1911, it exported 1,022 frozen sheep and 1,239,070 frozen quarters of beef.

The *Compañía Sancinense de Carnes Congeladas*, with a capital 3,000,000 gold piastres, has 2 establishments, one at Buenos Aires, other at Bahia Blanca : in 1911 it exported 895,824 sheep and 478 quarters of beef.

The *River Plate Fresh Meat Company*, with a capital of 2,268,000 gold piastres, exported 427,313 sheep and 562,088 quarters of beef.

The total amount of frozen meat exported in 1911 was 3,497,639 sl and 3,737,702 quarters of beef : in 1895 it was 2,022,650 sheep and 21 quarters of beef. As we see the export of beef has enormously increased.

The following table gives us a general idea of the exportation of various produce of horned cattle and sheep improvement (live and frozen meat, *tasafo*, extract of meat etc.):

TABLE X. — *Export of Livestock and Meat.*

Year	Live Animals		Frozen Meat		<i>Tasafo</i> , Extract of Meat and Preserved Meat		Total	
	Horned Cattle	Sheep	Beef		<i>Tasafo</i> No. of Animals	Extract etc. No. of Animals	Horned Cattle and Beef	Sheep and Meat
			No. of Animals	No. of Animals			No. of Animals	No. of Animals
1895	382,539	512,016	9,355	1,992,304	371,700	101,800	865,394	2,304
1900	150,550	198,102	66,571	2,385,482	268,000	61,400	546,521	2,583
1904	129,275	28,127	304,093	3,679,587	159,900	82,200	676,468	3,707
1908	60,916	103,792	573,946	3,297,667	92,100	155,400	882,362	3,404
1911	184,112	110,690	934,425	3,497,639	140,812	246,800	1,504,537	3,608

From these figures we see clearly that with the decreased export of live animals and *tasafo* there corresponds a large increase in that of frozen meat and meat extract : due to the new conditions of the export market, the progress of livestock improvement and the industries connected with

§ 5. EXPORTATION OF AGRICULTURAL AND LIVESTOCK PRODUCE.

We know that the Argentine foreign trade consists in the importation of manufactured articles and the exportation of raw agricultural and livestock produce. In view of the economic and financial conditions of Argentina, the export regulates the purchasing power of the consumers and consequently the importation. The whole economic life of the Republic is therefore based on it.

Since 1891, the trade balance of Argentina, has been favorable, that is every year, with a few rare exceptions, the exports have exceeded the imports in amount.

TABLE XI. — *Foreign Trade* (in gold pesos).

Years	Imports (a)	Exports (b)	Difference (b)-(a)
1861	22,441,120	14,322,589	— 8,118,531
1870	49,124,613	30,223,084	— 18,901,529
1880	45,535,880	58,380,787	+ 12,844,907
1890	142,240,812	100,818,993	— 41,421,819
1900	113,485,069	154,600,412	+ 41,115,343
1910	351,770,656	572,626,055	+ 20,855,399
1911	366,810,686	324,697,538	— 42,113,148
1912	384,833,469	480,391,256	+ 95,537,787

Let us now give a rapid glance at the increase of the exports, which is an important indication of the development of agriculture and livestock improvement.

TABLE XII. — *Export of Produce* (in gold pesos).

Year	Agricultural	Livestock	Forestry	Mineral	Game and Fish	Miscellaneous	Total
1896	43,132,585	70,534,040	1,268,663	352,840	205,025	1,308,863	116,802,016
1901	21,596,099	90,646,411	2,821,496	408,440	940,141	1,303,515	167,716,102
1906	157,654,692	124,146,439	5,921,859	273,816	1,098,000	3,168,523	292,253,829
1911	139,764,386	168,394,733	12,254,604	565,338	1,663,285	2,055,192	324,697,538
1912	278,186,572	188,215,956	8,983,112	285,277	2,008,212	2,712,132	480,391,236

The strictly agricultural produce exported increased from 1896 to 1912 from 43,132,585 to 278,186,572 gold pesos (an increase of 542%); live stock produce from 70,534,040 to 188,215,956 gold pesos (167%), forestry produce from 1,268,663 to 8,983,112 (608%).

Cereals and flax are the principal articles of agricultural produce exported:

TABLE XIII. — *Export of Cereals and Flax* (in gold pesos).

Years	Wheat	Maize	Flax	Oats
1896	12,830,027	15,994,556	6,856,106	38,389
1901	26,240,733	18,887,397	16,513,263	47,139
1906	66,561,181	53,365,687	25,915,861	1,117,184
1911	80,675,066	2,766,597	33,579,990	11,666,291
1912	97,835,174	108,908,193	34,213,565	21,858,577

Of the animal produce exported, the most important articles are frozen beef, and hides, together with live horned cattle.

TABLE XIV. — *Export of Horned Cattle etc.* (in gold pesos).

Years	Live Horned Cattle	Frozen Beef	Hides
1896	6,543,550	119,863	10,504,997
1901	1,980,372	4,490,447	14,130,194
1906	1,676,145	15,380,897	19,028,788
1911	8,202,750	31,283,396	34,440,015
1912	9,140,080	34,285,976	42,129,576

Of the forestry produce exported, *quebracho* and its produce have the greatest value: in 1912 (1) the quebracho wood exported had a value of 3,568,557 gold pesos (in 1896, it was 832,718 gold pesos) and the tanin extract had a value of 4,836,860 gold pesos (in 1896 it was 68,419 pesos).

(1) In 1911 the export amounted to 6,896,435 gold pesos.

§ 6. AGRICULTURAL HOLDINGS.

We know that the principal obstacle to the development of Argentine agricultural production, especially from the point of view of its yield per unit of area, is the bad distribution of the land: it is held by a limited number of persons, who, as a result of historical events or as speculators, have managed to get possession of enormous latifundia. Single proprietors and societies possess 100,000, 150,000 or 200,000 hectares, and in the Southern territories even 500,000 or more: the unit of area is no longer there the hectare but the square league (2,500 hectares). These enormous holdings serve to a large extent for livestock improvement, some have been brought under cultivation and are worked as tenancies, some remain productive until time, economic progress and above all railways and irrigation increase their value. This state of things certainly does not favour the increase of rural population, which in spite of emigration remains scanty, as the density is not yet 3 to the square km.

The concentration of real estate in a few hands, and the consequent deficiency of labour are the principal causes of the agrarian unrest by which Argentine agriculture suffers, and which, recently, has shown itself in the energetically agricultural provinces of the central region in serious agitations among the colonists.

The authorities have been for many years attentive to make up for the want of foresight of preceding Governments that allowed so large a portion of State land to be lost, and they are studying how, by means of a wise and energetic colonisation policy to encourage the subdivision of holdings, to attract a dense mass of permanent colonists, to people the waste lands and increase the agricultural production.

One of the most important signs of agricultural progress in Argentina is therefore the subdivision of rural land. Unfortunately we have not sufficient statistical data to follow the variations of this interesting phenomenon: from the scanty elements at our disposal, however, it appears that the tendency in favour of subdivision has become somewhat marked in recent years.

The first National Census of 1888 did not concern itself with this matter (1).

The National Census of 1895 only gives insignificant data as to the constitution of rural landed property: the 172,000 holdings (agricultural and stock farms) which the report deals with, would occupy 8,299,930 hectares of land. If it is calculated that the area really cultivated was not more than 4,892,005 hectares, we see that little more than half the land was brought under cultivation, the other half was left for grazing purposes. However, no idea can be really formed from the above census return as to the

(1) See *Censo Agro-Pecuario Nacional 1908* vol. I. p. XVI.

distribution of land at the time : dividing the number of hectares owned by that of the proprietors, we should get about 50 hectares per head, which is an improbable figure.

The National Census of 1908 gives some further particulars : it deals with 222,174 holdings representing a total area of 1,167,955 sq. kms. (116,795,500 hectares) out of the 2,952,554 sq. kms. forming the total area of the Republic. In 13 years (1895-1908) the number of farms would therefore have increased by about 50,000 and the corresponding area by 108,000,000 hectares.

The 227,174 holdings utilised for agriculture and livestock improvement were classified as follows : 48,323 were not more than 10 hectares in area; 53,954 between 11 and 50 hectares ; 29,626 between 51 and 100 ; 46,553 between 101 and 300 ; 12,992 between 301 and 500 ; 11,104 between 501 and 1,000 ; 10,284 between 1,001 and 2,500 ; 2,968 between 2,501 and 3,750 ; 2,052 between 3,751 and 5,000 ; 1,620 between 5,001 and 7,500 ; 1,157 between 7,501 and 10,000 ; 423 between 10,001 and 12,500 ; 781 between 12,501 and 25,000 ; 168 between 25,001 and 37,000 ; 65 between 37,001 and 50,000 ; 1,004, more than 50,000 ha.

These figures, observes the president of the Census Commission A. B. Martinez, are not entirely satisfactory ; it appears in fact that out of 222,174 farms considered, 102,277 or 46 % were less than 50 hectares, which would lead us to imagine that rural land was very much subdivided, or that latifundia did not prevail in the degree generally believed, either among the agricultural or the stock farms. Now, if it is true that there are many small holdings, especially among the agricultural farms it is, on the other hand, evident that the above proportion is too large latifundia still predominate to a large extent in both the agricultural and the livestock improvement fields, which is, besides, natural when we reflect that at the date of the Census an area of three million square kms. was inhabited by not more than six million persons.

However, especially in the grain regions, we find a tendency toward the subdivision of land, either through the inheritance of co-heirs, or the increase of lucrative commercial operations ; and this is proved by the transfers of land entered in the public registers. It is certain, concludes Martinez, that the next Census, the plan of which is now under study will show an increase of subdivision.

In the last ten years the movement has become more marked, equal through the action of the authorities, the landholders, commercial undertakings and railway companies. The land law of 1903, passed especially to prevent the formation of latifundia, no longer allows the acquisition by a single person of Government land of area of more than 2,500 hectare. From March 16th. to December 31st., 1912, in accordance with this law 4,850 hectares of public land were granted in lots of from 20 to 200 hectares for a total price of 411,000 pesos.

Government may exert a great and efficacious action in this field, since it still possesses, about 90,000,000 hectares of uncultivated land, suited to agriculture. On the other hand, various colonisation undertakings

very actively trading in land: they subdivide immense areas belonging to themselves or private persons, and sell them in lots to colonists on very fair terms: the Argentine papers are full of advertisements of sales by auction (*remates*) of farms of every size and in every part. This trade is facilitated by the payment of a part of the price at fixed date and by mortgage (1): it is not, however, without dangers, caused by speculators and the artificial raising of the value of the land.

A notable example of rapid land subdivision is provided by the Province of Cordoba (2): in the period 1898-1907, of 3,969,450 hectares constituting the colonies and colonised farms of the province, 1,129,294 hectares, or about a third, were sold to agricultural colonists. In 1906 the colonists holding land were 4,658: in 1910, they were 5,800.

The same results are met with in other provinces: the last agricultural statistical return gives two typical examples, one in a province where colonisation is intense, Santa Fé, the other in a territory, the Central Pampa, where, up to a few years ago, latifundia prevailed. In ten years (1901-1911) both showed a considerable increase of holdings of less than 2,500 hectares and a decrease of those of a greater area. In Pampa, the farms between 100 and 200 hectares in area have increased 337 %. In the following table, the variations in this respect in the two regions are compared.

TABLE XV.—*Variations in the Distribution of Landed Property in the Province of Santa Fé and the Territory of Central Pampa (1901-1911).*

Area of Holdings	Number of Holdings					
	Santa Fé			Central Pampa		
	1901	1911	Difference %	1901	1911	Difference %
Between 10 and 25 ha.						
26 » 50 »	4,200	6,876	+ 63.7	—	583	—
51 » 100 »	3,154	6,830	+ 116.5	114	423	+ 27.1
101 » 200 »	3,358	7,276	+ 116.7	129	2,174	+ 158.5
201 » 300 »	4,583	7,875	+ 71.8	64	401	+ 337.5
301 » 650 »	1,641	3,020	+ 84.0	54	87	+ 61.1
651 » 1,250 »	1,395	2,545	+ 82.4	68	330	+ 385.2
1,251 » 2,500 »	589	1,263	+ 114.4	99	512	—
2,501 » 5,000 »	442	768	+ 73.8	489	1,412	+ 188.7
5,001 » 10,000 »	422	566	+ 34.1	741	445	— 39.9
10,001 ha. and over.	492	205	— 58.3	1,114	431	— 6.3
Total . . .	20,256	37,360	+ 84.4	3,496	6,970	+ 99.3

(1) See in this connection the articles in this *Bulletin*, for August, 1911, and November, 1912, "Rural Land Credit in Argentina" and "Value of Land and Rural Mortgages in Argentina in 1911".

(2) See A. B. Martinez "L'Argentina au XX^e Siècle", p. 112.

The tendency towards subdivision of land is also seen in the increase of transactions in connection with land, followed by an increase of mortgages. The following table shows the increase of sales and mortgages for the ten years 1901-1911 and also gives an idea of the increase in the average prices. (1)

TABLE XVI. — *Sales of Rural Holdings and Mortgages Passed between 1902 and 1911.*

Years	Sales			Mortgages	
	Hectares	Value (in pesos m/n)	Average Price in gold pesos	Hectares	Value (in pesos m/n)
1902	6,268,761	91,543,789	14.6	4,847,979	82,085,815
1903	8,279,329	116,408,133	14	6,376,702	46,178,193
1904	11,038,299	142,917,166	13	6,254,277	57,762,168
1905	16,390,970	232,623,453	14	7,039,327	77,810,140
1906	10,795,205	205,650,306	19	6,229,550	107,615,363
1907	7,527,435	177,436,976	23	7,566,001	131,436,255
1908	7,286,899	215,974,135	29.6	7,365,857	136,772,362
1909	8,642,387	264,510,900	30.4	5,665,793	158,416,336
1910	13,701,934	359,024,595	26	7,609,561	218,754,412
1911	11,149,253	396,837,383	35	8,919,758	281,137,432
1902-1911 . . .	100,980,449	2,202,746,836	—	67,822,805	1,297,945,552

The tendency to subdivide holdings is, however, hindered by the prevalent system of working farms, that is, as tenancies, with rent paid in money or kind; in 1911, it was calculated that in the grain region

(1) The following table shows the increase in the average prices of land sold in the years 1901, 1907 and 1911 in eight provinces of the Republic.

Years	Buenos-Aires	Santa-Fé	Tucuman	Mendoza	La Rioja	Panamá	Río Negro	Chubut
1902	35	18	81	3	24	6	3	2
1907	125	37	97	9	2	7	5	3
1911	121	63	36	22	16	32	15	7

of 65,111 farms, 36,458 (55.99 %) were worked as tenancies, 7,107 (10.92 %) as share tenancies, and 31,546 (33.09 %) by the proprietors. If we consider the prevalent conditions of lease, short period and the obligation to sow the fields with lucern the last year, we see that the tenant's position is precarious and consequently that he will hardly become attached to the land (¹). If some colonists, in spite of this, succeed in becoming landholders, a large number fail and pass from one farm to another.

The high wages offered at the time of the grain harvest, which, owing to new land being brought under cultivation, have become much more frequent, favour temporary immigration (the celebrated *golondrina* immigration). The labourers, at the termination of the harvest, instead of establishing themselves on the soil, return to their homes, beyond the Ocean, where life is cheaper and where they invest the savings made in Argentina.

On the other hand, the extraordinary development of the urban centres and the increase of works of public utility have withdrawn and continue to withdraw a large number of labourers from the country. This, writes Lopez Mafan, has caused an extreme reduction in the number of agricultural labourers, together with an elimination of the fit in consequence of which only the least capable are retained by agriculture.

Another factor contributing to the depression of agricultural economy, is the increasing rise in price of the soil, due not only to ordinary causes, such as the development of railways, the increase of population, agricultural progress etc., but also to accidental causes, unrestricted speculation, the rise in wages, the cultivation of land of inferior quality, the excess of the exports over the imports which has increased the demand for land, etc. "At the present economic stage", writes Lahitte, the eminent manager of the Department of Statistics and Rural Economy, "agriculture is not an end, but a means for giving the land value, and making large gains in a short time." It thus often happens that the new owner does not find in the land purchased sufficient remuneration for the capital invested.

The leases, shares in the profits etc. will have to be in proportion to the requirements of the invested capital, rather than to the fertility of the soil. Hence often the dissatisfaction of the landlords and even more that of the tenants.

The want of working capital, felt above all by the colonists, aggravated by bad system of credit, is another important cause of the depression of agricultural economy above remarked. Direct agricultural credit, writes Lopez Mafan, we may say, does not exist for the colonist, though the National Bank is authorized to grant loans to farmers. What is called commercial credit is, to a large extent, dissimulated agricultural credit. Between the colonist and the Bank, there is a whole series of middlemen, country dealers (*almaceneros* etc.), large merchants etc., and the final consequences

(1) Cf. J. LOPEZ MARAN "*El actual problema agrario*". General Management of Agriculture and Agricultural Defence. Buenos Aires. 1912, and the above mentioned work of LAHITTE, *La situación agrícola*.

of this are felt at the harvest. The result is a usurious system of credit which, when the season is bad, causes the ruin of the colonist.

As a remedy to the evil, the Government has undertaken studies for a system of agricultural credit, by which the parasitic middlemen may be got rid of, and the colonist provided with the working capital he needs. The Department of Statistics and Rural Economy, under Lahitte's wise management, has prepared some very interesting reports for the purpose showing the needs of agricultural economy in Argentina at the present stage. Various bills, based on these researches, have been laid before Parliament since 1911.

A vast reform is contemplated including the sale and distribution of the national land, mortgage and personal agricultural credit, co-operation, mutual aid etc. (1). This reform is to be based on the foundation of a large agricultural credit institution : *El Banco Agricolo de la Nación*. Its office will be to co-ordinate the colonisation work for which the land laws have made preparation and to favour the foundation and the working of co-operative credit societies etc., which would thus be placed under special regime.

This reform will, however, require a good deal of time. Adolfo Muñoz, now Minister of Agriculture, in view of the urgent need for the adoption of measures for the purpose, has presented new bills (2) to facilitate an increase of colonizing immigration and to improve the conditions of the colonists by encouraging co-operation in its various forms. For the purpose he proposes that a special department be formed in the Bank of the Nation to lend to co-operative societies constituted on definite lines.

This reform, with which we shall deal fully in due time, is destined to give a new direction to the agricultural economy of Argentina and to eliminate the obstacles that hinder the development of agricultural production which, as we have seen in the course of these remarks, has a splendid future before it.

(1) The land system and the insufficient population scattered over a very large territory have not yet allowed of an important co-operative movement. On the other hand, the dealers interested oppose the idea violently. Notwithstanding this, co-operation is rapidly making progress, thanks to Government propaganda. Among the forms which have given the best results we must mention hail and fire co-operative insurance societies.

(2) "Proyecto de Ley de Colonización"; "Fomento de co-operativas agrícolas". The Deputy F. Saavedra Lamas has presented a bill on "La colonización capitalista"; the Deputy F. one on "El Banco Colonizador de la Nación Argentina" and one on "Banco Agrícola de la República".

JAPAN.

TAXATION OF LANDED PROPERTY.

OFFICIAL SOURCES:

- (1880) MUSHO HOREI SHURAN (*Collection of Laws and Decrees of the Ministry of Agriculture and Commerce*). Tokio, 1912.
- AGRICULTURE IN JAPAN. Published by the Bureau of Agriculture of the Department of Agriculture and Commerce. Tokio, 1909.
- ENQUÊTE FINANCIER ET ÉCONOMIQUE DU JAPON (*Financial and Economic Yearbook for Japan*). Tokio, 1912.
- SOSHOMU TOKKEI HYO. (*Statistics of the Department of Agriculture and Commerce*). Tokio, 1910.

§ I. HISTORICAL NOTES ON THE LAND SYSTEM.

Before entering on a general consideration of the taxes now burdening landed property in Japan, it may be well to give a short historical sketch of the land system of the Empire.

Japan at the present time is an eminently agricultural country, as it has always been from remote ages. The fertility of the soil and the natural tendencies of the inhabitants abbreviated the nomadic period common to all pastoral nations. It was quickly followed by one of stability and agricultural development. Laws on the transfer of landed property were therefore introduced at a very early date. The first authentic notices of subdivision of rural property date from the 7th century of our era when the land was divided into domains belonging to the Emperor, landed estates belonging to the temples (Shintoist and Buddhist) and land belonging to private persons. An imperial edict promulgated at the time of the reforms of the Taikwa period (645-649 of our era) shows that it was then the habit to buy up private land in order to transfer it to the Imperial House. The chief object of these reforms was to put an end to this abuse and to facilitate the formation of small private holdings. The system, however, was but rudimentary; for should a holder die, his land, granted for a period of six years, reverted to the Crown.

We shall pass over various charges of small importance and only mention the origin and signification of the *shoen* (fief) which, with some modifi-

ation, has served as the basis for the land laws existing since the Restoration of 1867. The *shoen* originated in the year 720 A. D.; and was essentially the private property of the feudatory and was perfectly free from taxation. This system naturally tended, on the one hand, to give vast tracts of land to the most powerful families, and, on the other, to reduce the number of holdings in the hands of the Crown. The right of imposing taxes on his vassals rested exclusively with the feudal lord. During the reigns of the Tokugawa (1603-1868), the government of the *shoguns* prohibited the purchase or sale of lands with a view to prevent an excessive concentration of holdings in the hands of a few. Exception, however, had to be made in favour of the great centres, such as Yedo (now Tokio), Osaka and Kioto. But this prohibition had little effect, for it was easily eluded, especially through fictitious rents, which, however, were prohibited later though not without danger to agricultural progress.

Thus we find three distinct periods in the history of the Japanese land system : in the first the right of holding land was a prerogative of the Crown, which could, if it so willed, temporarily abrogate its prerogative; in the second a feudal system prevailed, when, though formally derived from the Crown, the right was in reality a prerogative of the feudal lords; in the third period, following the restoration of 1867, the right of holding private landed property was absolutely guaranteed and firmly established by law. In 1867, the Imperial Government issued a decree that land dependent on rural groups was the property of the village; in 1874, the land was subdivided into public land and private holdings; in the following year, it was further decreed that all titled deeds must be personal and only transferable by legal contract. In 1886, systematic land registration was put into force.

§ 2. CLASSIFICATION OF HOLDINGS.

Having thus traced the chief historical features of the Japanese land system, we turn to the subject of the classification of holdings at the present time. In considering this subdivision, it must be borne in mind that traditional, religious or civil reasons have often necessarily led to the modification of certain legal principles of the West when applied in Japan. Thus we find land divided into two large classes, the one the property of the State, the other private. State land is subdivided under four heads:

The 1st. Class comprising :

- (a) Land belonging to the Crown (the areas on which the Imperial palaces and their dependencies stand);
- (b) the land belonging to the temples of Ise (1), to the Imperial tombs and to the temples belonging to the State or to the provinces.

(1) Ise, one of the provinces of the Tokaido. Its principal city is *Tsu*, celebrated for the *shinto* temples of *Vamada*, the most ancient and most venerated in Japan.

The 2nd. Class comprising :

- (a) land belonging to the Imperial princes ;
- (b) land belonging to the Government, such as that occupied by the various ministerial departments, barracks etc.

The 3rd. Class comprising :

- (a) land of every description, water-courses, seas, lakes, ponds, marshes, dikes, aqueducts, etc, not belonging to private individuals ;
- (b) land occupied by railways ;
- (c) " " telegraph or telephone offices ;
- (d) " belonging to light-houses ;
- (e) land occupied by ruins, national monuments, public parks etc ;
- (f) " that has belonged previously to persons who have lost their right to hold it ;
- (g) " occupied by temples or cemeteries not owned by private persons .
- (h) " set apart as places where capital punishments take place.

The 4th. Class comprises land occupied by temples, schools or other educational buildings, hospitals, asylums for the poor, etc. not belonging to private persons ;

In the case of private property there are only two classes.

The 1st. comprises :

- (a) cultivated land, dwellings, woods and forests, the private ownership of which is confirmed .
- (b) land occupied by schools, hospitals, magazines, temples etc., belonging to various communities ;

The 2nd. comprises :

- (a) land occupied by temples or cemeteries not belonging to the State ;
- (b) land occupied by aqueducts, wells, reservoirs, canals for irrigation, roads etc, not belonging to the State ;
- (c) roads and holdings etc. of private ownership.

The land registers are kept in the office of the collector of land taxes.

A special law regulates the classification of the holdings.

§ 3. THE AMENDMENT OF THE LAND TAX.

The system of payment of the land tax in kind in use in Japan from the earliest period of its history was only replaced by the present system in 1873. Formerly, even before the power of the *shoguns* was established, there were four kinds of taxes on land ; the land tax proper called *bu* (payable under the form of labour); that called *bi* (payable as rent), that called *cho* (payable in articles of clothing) and finally the *zatō* (miscellaneous taxes). The land tax, payable in kind, amounted to 3 % of the yield ; the total amount of the taxes did not exceed 6 %. Under the feudal system the farmer was in fact obliged to furnish the means of subsistence for the military class, and thus arose a special system

by which one half of the crops went to the Government and the other to the farmer. Later, this tax was divided so that four tenths went to the Government and six were retained by the farmer.

According to statistics referring to the eighth year of the period *Tenmei* (1838), the total amount of rice produced in the Empire was 30,430,000 *koku* (hl. 54,774,000), out of which payment was made of 12,170,000 *koku* (hl. 21,906,000) equivalent to 40 % and corresponding to the fourteenth payable to the Government.

The substitution of a tax payable in cash for one payable in kind rendered necessary by the altered conditions of the country after Japan had been opened to Western civilisation, required no small preparatory labour, more especially with regard to fixing the value of the land.

In 1872, the year preceding the change, the amount of rice paid in land taxes was 12,510,000 *koku* (22,518,000 hl.); in 1873, in spite of the new law the tax could not be collected in cash and was therefore paid in kind to the amount of 12,130,000 *koku* (21,834,000 hl.).

It was in this year that the Government abolished the prohibition relative to the purchase and sale of cultivated land already referred to and then began the great work of the valuation of the land. The necessary researches were begun in 1874 and only completed in 1882 and they serve as the basis on which to calculate the land tax.

For this calculation it was necessary to determine the gross yield of the land, the cost of seed and manure, and the average amount of interest on the capital invested. Then the value (*V*) of the land was calculated with the help of the formula :

$$V = R - (t + t' + t'') \frac{I}{r}$$

in which *R* = the gross yield; *t* = the cost of seed and manures in hundredths of *R*; *t'* and *t''* = the communal tax and the land tax respectively hundredths of the value *V*; and *r* the rate of interest.

Thus, if, for example, we suppose that the cost of manure amounts 15 % of the gross yield, that the communal tax is 1 % of the value of the land, that the land tax is 3 % of the same value and that the average interest on the capital is 6 % the preceding formula becomes

$$V = \left[R - \left(\frac{15R}{100} + \frac{V}{100} + \frac{3V}{100} \right) \right] \frac{100}{6}$$

whence the official value of the land may be deduced :

$$V = 8.5 R.$$

This signifies that in the above mentioned conditions the land tax (of *V*) is equal to 25.5 % of the yield. But it must be observed that

second formula has no value except under similar conditions: it is logical indeed that if the rate of interest varies much, the yield, the various expenses and probably also the taxes on the land will vary in consequence.

We shall now give some few particulars as to the determination of the various items in this calculation.

(a) *Harvest.* The productiveness of the land is determined in the following way; for rice-fields it is expressed in rice, for fields not irrigated; in *soy* and *soya*; for lands where the mulberry, tea, hemp and indigo are cultivated, in rice and barley. The official calculation is based upon the average of the five preceding years and on the crop of the current year, applying proportional co-efficients to these figures.

(b) *Yield.* To estimate this, it was necessary first to establish a fair price or cereals to serve as a basis. But this calculation required special attention because of the extreme variability in the price of grain, and it was necessary to inquire the market prices in the different parts of the Empire, and compare them with prices in private contracts. The average prices of the preceding years were also taken into account. During the first year after the law came into force, the average prices per *koku* (lit. i. 8) for the whole country were fixed at 5 yen 185 for rice, 1 yen 978 for barley and 3 yen 150 or *soya*. For the sake of comparison we may say the prices at present are respectively about 24 yen, 8 yen 50 and 12 yen 50 per *koku*.

(c) *Interest.* Interest was calculated according to the cost price of the produce compared with the yield of the land, or by taking account of the difference between these two figures. The cost of the carriage of the produce to the market was also considered. As a result of these calculations the average interest could be fixed at 6.1 % for rice-fields and 6.3 % for land producing other crops.

(d) *Cost of seed and manure.* For these expenses the average was fixed at 15 % of the gross yield; the communal tax being fixed at one-third of the land tax.

Later the land tax, at first fixed at 3 % of the official value of the land, was reduced to 2.5 %. However, in 1898 two economic facts, viz. the necessity of meeting new expenses, and the increase in the price of cereals, which naturally caused a considerable rise in the value of land, induced the Government to raise the land tax from 2.5 to 3.3 % for a period of five years. In 1903 the former rate was returned to, but it was raised in 1904 at the beginning of the war to 5.5 %.

§ 4. THE PRESENT LAND TAX.

The official valuation of the land, as entered in the cadastre dates as we have seen, at least from 1882, the year in which the valuation of landed property was completed. In every country this value varies considerably in the course of thirty years, but *a fortiori* in Japan, where the Empire underwent a political and economic transformation previously unknown in history. The natural consequence was that in a great majority of cases the law was

badly carried out both from an economic point of view and from that of distributive justice. It is true that in all nations and more especially in Japan, it is almost impossible to have a cadastre corresponding exactly with the actual money value of landed property, but the difference between the official valuation and the real value had become so great in Japan about 1909 that a radical change was urgently called for. This was, however, made exclusively with regard to real estate and was accomplished in the two years from 1909 to 1911. The new law takes as a basis of the taxable value of built on land ten times its annual rental value, of course not including the absolute value of the real estate. But as the value thus obtained far exceeds the official value entered in the cadastre and involved a disproportionate increase of the tax to the detriment of the proprietors, the rate was diminished from 5.5% to 2.5%. This means that the present land law imposes on built on land a tax equal to a quarter of its rental value.

With regard to land not built upon, it was decided that instead of making a new official valuation it would be better to vary the rate of taxation so that it might correspond as far as possible with the income and the requirement of the Treasury. Thus the rate was fixed at 4.7% of the official valuation for rice-fields, and at 5.5% of the same valuation for other land. An exception was made in favour of the province of Hokkaido, where the rates were reduced respectively to 3.4 and 4%. It is not difficult to understand the reason for these differences; the different rates for ricefields and other land are due chiefly to the necessity so urgent in Japan, of putting a check in every way on the continual increase in the cost of rice. The difference between the tax paid in Hokkaido and in the rest of Japan is a result of the excellent home colonisation policy pursued by the Government to accelerate as far as possible the agricultural development of the island of Yesso.

We may add that the land-tax on mortgaged land is paid by the creditor and in the case of a long lease (exceeding one hundred years) by the holder of the land; in all other cases by the proprietor of the estate. Land belonging to the State and that included in the second class of private property (see the section dealing with the classification of land) is exempt from the payment of land tax. The first class of private holdings, which alone is taxed, is subdivided into two groups:

- 1st. Arable land, inhabited areas, salt pits, mines and mineral springs
- 2nd. Lakes, ponds, forests, pastures, waste land, etc.

It must be observed that the tax on inhabited areas has differed from that on other land since the war when special taxes were imposed. The land on which rural dwellings are built is subject to an *ad valorem* tax of 8%, while inhabited areas of urban centres pay 20%.

In principle, the tax does not vary with the yearly harvest; but some exceptions are made in favour of land devastated by exceptional calamities. In such cases the land is exempted from the payment of the tax from the year of the disaster. Land only recently reclaimed, and such as comes under the law on the readjustment of arable land is also exempted for a number of years, varying according to circumstances.

§ 5. ADDITIONAL LAND TAXES.

The land tax properly so called is not the only fiscal charge on land in Japan, there are local taxes and communal tithes. These charges are naturally not uniform for the whole country; they vary in different localities and from year to year, and they are fixed by the local authorities.

There are, however, certain rules of which we give the essential points.

The total amount of these taxes must not as a rule exceed 60 % of the land tax properly so called; but, in exceptional cases, with the approbation of the Ministers of the Interior and of Finance, they may be raised to 72 %. These two Ministers may also impose additional taxes within the above limits, when any land requires special works to remedy damage caused by disasters, or when irrigation works are needed, or in the case of measures necessary to prevent the diffusion of an epidemic. These additional taxes are paid by the proprietors who benefit by the measures of the Government, except in the case of mortgaged holdings, when the creditor bears the expense.

We conclude these brief details relating to the taxation of land in Japan by giving some statistics respecting the land subject to taxation and the amount paid during the ten years from 1903 to 1912.

1. — *Area subject to the Land Tax.*
 (in cho. 1 cho = 1a. 0.99).

YEAR	Ricefields	Other Farms	Land Built upon	Salt pits, Springs, Roads	Forests	Pastures and Plains, not Wooded	Miscellaneous Holdings	Total
1903	2,800,393	2,333,656	389,644	18,506	7,009,313	1,100,217	10,896	13,662,624
1904	2,814,677	2,379,056	391,252	18,836	7,078,233	1,133,832	11,125	13,830,039
1905	2,826,978	2,388,584	394,506	19,266	7,130,761	1,157,731	11,689	13,929,515
1906	2,831,869	2,297,586	392,561	19,457	7,162,367	1,166,123	11,784	13,981,688
1907	2,843,717	2,411,984	390,322	20,346	7,257,279	1,175,418	12,033	14,111,279
1908	2,845,000	2,411,440	388,290	20,293	7,321,417	1,204,170	11,971	14,204,582
1909	2,852,739	2,410,129	387,649	20,421	7,431,619	1,227,267	11,716	14,341,539
1910	2,860,063	2,411,674	387,802	20,471	7,509,952	1,262,741	11,744	14,475,478
1911	2,850,266	2,493,157	386,179	20,472	7,077,470	1,298,214	11,830	14,538,528
1912	2,857,831	2,400,043	384,702	19,837	7,702,683	1,304,943	12,156	14,682,175

II.—*Amount of the Land Tax during the Years 1903-04—1912-13.*
 (1 yen = Rs. 2.58).

Years	Amount in thousands of yen
—	—
1903-04	46,873
1904-05	60,940
1905-06	80,473
1906-07	84,637
1907-08	84,974
1908-09	85,418
1909-10	85,694
1910-11	76,292
1911-12	75,073
1912-13	75,408

N.B. The data respecting the years 1911-12 and 1912-13 are reproduced from the Estimates of Expenditure.

